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ENVIRONMENTAL IMPACT STATEMENT-CONSOLIDATED SPACE OPERATIONS CE--ETC (U)  
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# Environmental Impact Analysis Process



FINAL  
ENVIRONMENTAL IMPACT STATEMENT  
CONSOLIDATED SPACE OPERATIONS CENTER  
JANUARY 1981

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DEPARTMENT OF THE AIR FORCE

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future. The Space Defense Operations Center at Colorado Springs and the Aerospace Data Facility at Buckley Air National Guard Base are both Satellite Control facilities that are in the vicinity and that typify the kind of thing that will be done at CSOC. A large contractor base to support satellite control operations exists in the vicinity. However, Kirtland and Malmstrom AFBS are also evaluated as Alternates 1 and 2 respectively. At Malmstrom AFB, CSOC could be sited on-base at either of two locations designated Options A and B.

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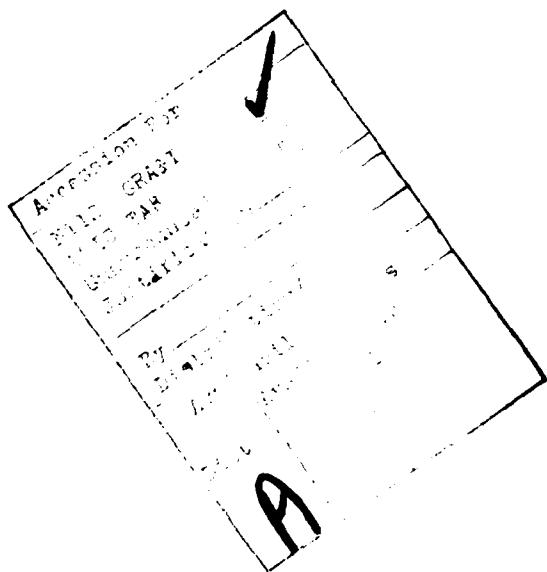
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## I. PROGRAM OVERVIEW

THIS DOCUMENT INCLUDES PUBLIC COMMENTS RECEIVED FROM FEDERAL, STATE AND LOCAL AGENCIES, ORGANIZATIONS AND INDIVIDUALS, CONCERNING THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR THE CONSOLIDATED SPACE OPERATIONS CENTER (CSOC). RESPONSES TO THESE COMMENTS ARE INCLUDED, ALONG WITH AN UPDATE OF SECTIONS I (PURPOSE AND NEED FOR ACTION) AND II (ALTERNATIVES INCLUDING THE PROPOSED ACTION) OF THE DRAFT EIS. THE FINAL ENVIRONMENTAL IMPACT STATEMENT CONSISTS OF THIS DOCUMENT AND THE DRAFT EIS DATED OCTOBER 1980.

### I.1 Purpose and Need for Action

Currently the Department of the Air Force provides command and control to orbiting spacecraft through the Satellite Control Facility (SCF). The SCF is a worldwide network of seven remote tracking sites and a Satellite Test Center (STC) at Sunnyvale, California. The STC is a critical control element and vulnerable to possible natural catastrophe or hostile acts. In addition, the SCF workload has increased 125% in the last two years. By 1985 the center will have to support some 65 satellites; at the present time the center supports 40 orbiting satellites. A second facility termed the Satellite Operations Center (SOC) is needed to share the increasing workload.

In February 1979 the Office of Management and Budget requested the Department of Defense (DOD) and the National Aeronautics and Space Administration (NASA) to evaluate whether a joint mission control center or separate DOD and NASA facilities should be used to meet post-1985 Space Shuttle mission requirements. The result of this evaluation was a recommendation to establish a separate DOD facility that would provide a higher degree of security for military Space Shuttle missions. This facility is henceforth called the Shuttle Operations and Planning Center (SOPC).

The two mission elements of satellite control (i.e., SOC) and Space Shuttle operations (i.e., SOPC) would be combined for management, operational and economic efficiencies into the Consolidated Space Operations Center (CSOC). The satellite control element of CSOC will perform communications, command and control service functions for orbiting spacecraft. The Shuttle element will conduct Department of Defense Shuttle flight planning, readiness, and control functions. In this capacity it will provide direct mission authority over DOD Shuttle missions; respond to national priorities; and protect national security data.

### I.2 Description of Proposed Action and Alternatives

The Department of the Air Force proposes to locate the Consolidated Space Operations Center (CSOC) in the Peterson Air Force Base/Colorado Springs area.

The Peterson Air Force Base/Colorado Springs area was selected as the prime candidate because of its unique operational advantages which accrue from its proximity to related activities, namely the Space Defense Operations Center (SPADOC) of the North American Air Defense Command at the United States Air Force Cheyenne Mountain Complex. Proximate location of CSOC and SPADOC would provide a foundation for significant, long-term operational efficiencies stemming from convenient face-to-face planning as well as shared support tasks. In this regard, SPADOC would be able to provide the CSOC with a link into the existing space surveillance and warning structure. The proximate siting of these two functions also offers flexibility to accommodate future, unfolding defense missions in space.

The CSOC would require a new technical facility totalling about 370,000 square feet plus 100,000 square feet of support facilities. An artist's rendering of a typical CSOC facility is presented in Figure 1; variations of this design layout would be employed at each of the candidate locations to accommodate local topography and other existing structures. Construction of CSOC is currently planned to begin during Fiscal Year 1982 on one of two possible sites in the Colorado Springs, Colorado area.

When fully operational in mid-calendar year 1985, the CSOC would employ approximately 300 Air Force military personnel, 100 Department of the Air Force civilian personnel, and approximately 1400 contractor personnel. Operational manpower for CSOC would be phased over a three-year period beginning in Fiscal Year 1983, as indicated in Table 1 below. The accompanying base support requirement (for such services as personnel, accounting, civil engineering, etc.) would cause an additional manpower increase of about 120 persons.

Table 1  
CSOC Personnel Phase-In

Personnel Category	Fiscal Year			Total
	1983	1984	1985	
Military: Officers	27	29	72	128
Airmen	51	55	84	190
Total Military	78	84	156	318
Civil Service	11	28	72	111
Contractors	119	337	957	1413
Base Support	16	34	71	121
<b>TOTAL PERSONNEL</b>	<b>224</b>	<b>483</b>	<b>1256</b>	<b>1963</b>

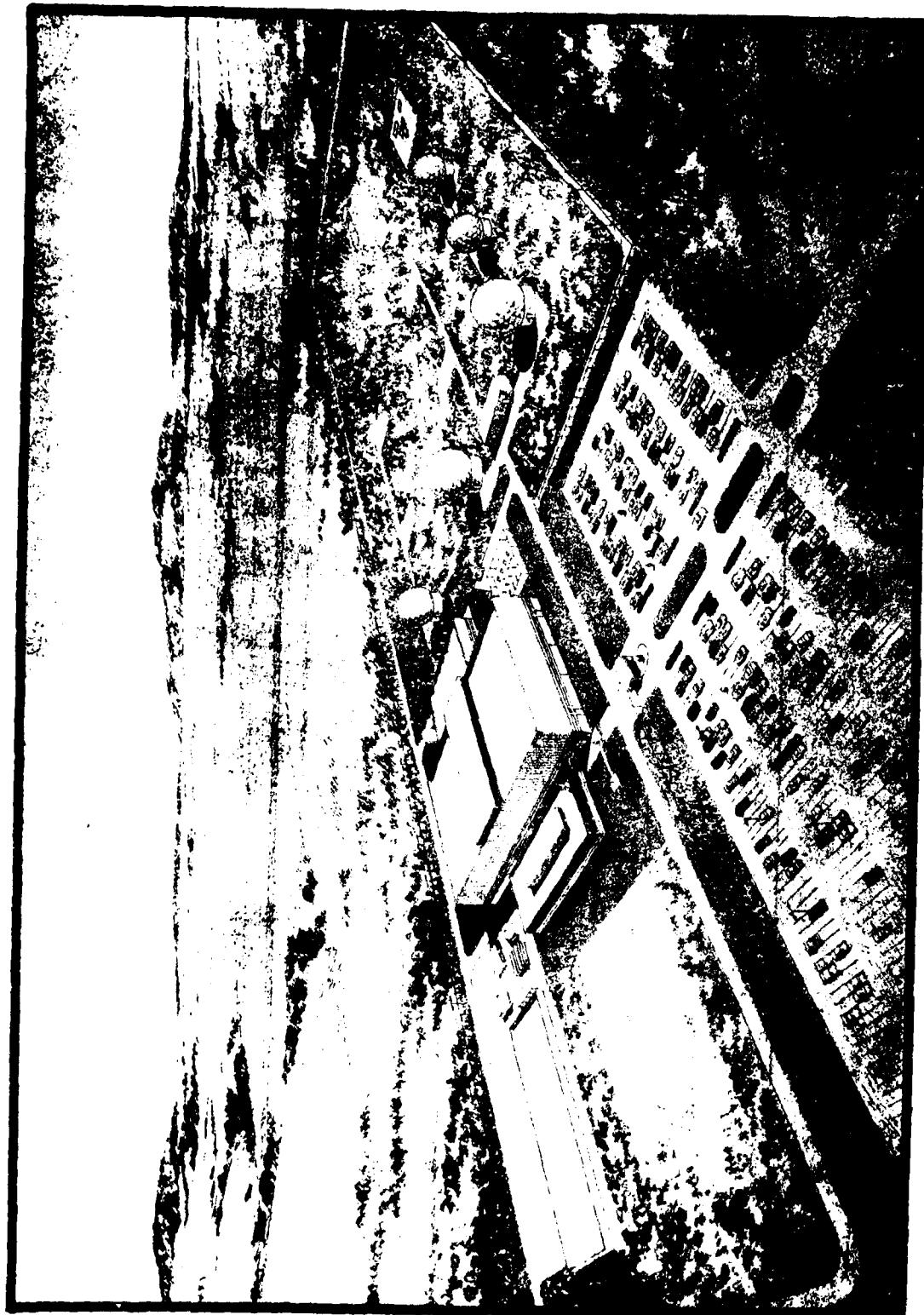


Figure 1 Artist's Rendering of Typical CSOC Facility

For purposes of determining population-related impacts, the total number of CSOC employees was assumed to be about 2000. Using a factor of 3.2 persons per household, the CSOC-generated population would therefore be 6,100 additional people at each of the three candidate locations.

The three locations — Peterson AFB/Colorado Springs, Kirtland AFB/Albuquerque, Malmstrom AFB/Great Falls — were considered as candidate CSOC sites and all meet the basic geographic, technical, support and resource siting criteria. The Colorado Springs location is preferred because of its unique operational advantages. The positive effects that accrue from the proximity of NORAD Headquarters, a command which has functions that depend heavily on space operations, are the most important for the long-term future. The Space Defense Operations Center at Colorado Springs and the Aerospace Data Facility at Buckley Air National Guard Base are both Satellite Control facilities that are in the vicinity and that typify the kind of thing that will be done at CSOC. A large contractor base to support satellite control operations exists in the vicinity. However, Kirtland and Malmstrom AFBs are also evaluated as Alternates 1 and 2 respectively. At Malmstrom AFB, CSOC could be sited on-base at either of two locations designated Options A and B.

#### I.3 The Environmental Consequences of the Proposed Action and Alternatives

The environmental consequences associated with the preferred and alternate locations for the CSOC facility are comparatively presented in Table 2. This table lists the impacts by attribute and location. CSOC would not cause a significant adverse environmental impact at any of the candidate locations. There appear to be some minor environmental impacts, which vary by type depending on the particular location concerned. These minor impacts appear evenly distributed among the alternative locations being considered.

#### I.4 Mitigation Measures Proposed as Part of the Project

As part of the construction and operational phases of this project, the Air Force proposes to include specific mitigation measures designed to minimize various impacts and to comply with control measures contained in the State Implementation Plans (with regard to air quality) applicable to each candidate location. These measures are listed below and include those actions that are within the authority and funding capability of the Department of the Air Force.

##### All Locations:

1. Incorporate instructions in the grading plans outlining the procedure to be used in the event an archaeological/historical resource is uncovered during grading operations.
2. Perform field survey measurements after antenna installation to identify areas where controlled or restricted access is found to be necessary.
3. Restrict all air traffic within 1000 feet of the antenna field to avoid possible exposure of electroexplosive devices to antenna radiation.

4. Implement staggered work hours for the CSOC project so as to avoid conflicts with peak am and pm base traffic.
5. Promote ridesharing (i.e., carpools and vanpools) by CSOC employees with a goal of achieving 35% ridership.
6. Stabilize all roads at the CSOC (including any access roads) to prevent fugitive dust.
7. Comply with local dust control and grading ordinances.

Peterson AFB/Colorado Springs Location:

1. Consider leasing the remaining portion of Section 24 (or 26) adjoining the CSOC fenced complex, to local farmers for live-stock grazing or other compatible farming activity.
2. Plant trees and shrubs along the west and south property lines of Section 26 to obscure the view of the CSOC facility and antennas from nearby residents and travelers on Enoch Road.
3. Reassess traffic conditions at Highway 94/Peterson Road intersection (following completion of the signalization improvement project) after CSOC is in operation to determine whether car/van pooling of CSOC employees and CSOC shift hours, combined with the improved intersection, are successful in minimizing congestion at this intersection. Determine if additional corrective measures are needed that are within the ability of the CSOC to implement.

Kirtland AFB/Albuquerque Location:

1. Encourage the use of Eubank Gate by CSOC employees during peak am and pm hours in order to reduce the impact on the Wyoming, Gibson and Truman gates, and to reduce traffic on Pennsylvania Avenue and Wyoming Boulevard.
2. Based on sufficient demand by CSOC employees, extend existing base shuttle bus system to the CSOC to supplement Albuquerque's public bus system.
3. Encourage delivery of construction equipment/materials outside the peak am and pm hours at the base.
4. To extent feasible, route all access roads and other CSOC structures away from already-identified archaeological sites.
5. Enclose archaeological Site No. 4 if required, to avoid accidental disturbance during construction.

Malmstrom AFB/Great Falls Location:

1. Option A: Encourage delivery of construction equipment/materials outside peak am and pm base hours.
2. Option B: Provide two exit lanes between the CSOC parking lot and US 87/89 to reduce traffic delays during peak am and pm exiting times.
3. Option B: Encourage construction traffic to access CSOC site via US 87/89 to minimize impact on main base traffic and base roads.

I.5

#### Mitigation Measures Recommended for Consideration by Other Agencies

The following mitigation measures are supported by the Department of the Air Force although they are outside their implementing capability and would have to be acted on by other agencies. They are measures which would further reduce the long-term impacts of the CSOC project.

##### Peterson AFB/Colorado Springs Location:

1. Installation of traffic control device to provide safe entry of CSOC vehicles onto Highway 94 from Enoch Road. (This could be part of the Colorado State Highway improvement project presently underway.)
2. Signalization improvement of Highway 94/Peterson Road intersection. (This project is presently underway by the city of Colorado Springs.)
3. Establishment of secondary southerly route between the CSOC and Colorado Springs. (This is included in the intermediate improvement plans of El Paso County.)
4. General plan the unincorporated area between Ellicott and Colorado Springs, and implement the adopted General Plan with zoning.
5. Evaluate the long-term need for increasing Highway 94 from a 2-lane to a 4-lane highway as a result of the CSOC and other planned developments in the eastern part of El Paso County.
6. Public bus route(s) between Colorado Springs and the CSOC.

##### Kirtland AFB/Albuquerque Location:

No additional mitigation measures are recommended.

##### Malmstrom AFB/Great Falls Location:

1. Installation of signal and left-turn lanes on US 87/89 to provide safe ingress/egress to CSOC (in the Option B case only). This improvement project could be included in the State Highway Department's planned improvement project for US 87/89.

I.6

#### Alternatives Eliminated from Further Study

A total of seventeen (17) specific sites at twelve (12) different military installations located throughout the continental United States were surveyed as potential candidates for the CSOC. A site survey (No. 78-21) was conducted in May and November of 1978, and again in January 1979. Site selection criteria was established for the site surveys and were used for evaluating the location of the CSOC. A site evaluation was made for each of the seventeen locations against the site selection criteria. The evaluation and conclusions are contained in the document entitled "HQ USAF Report on the Site Selection for the CSOC", dated December 1979.

The Secretary of the Air Force later directed on 8 August 1979, that the final three candidate sites be re-surveyed. The purpose of this re-survey (No. 79-26) was to 1) update the technical data, 2) determine the impact the CSOC mission requirements would have on each candidate base, 3) perform a preliminary informal environmental analysis, and 4) investigate the potential use of existing facilities to reduce CSOC facility costs. The general conclusions of this survey stated there were no over-riding technical, environmental or base support reasons for selecting one site over another. This survey additionally included evaluation of Sections 24 and 26 (at the Peterson AFB/Colorado Springs area) for locating the CSOC facility complex. The findings, evaluations and conclusions are included in the aforementioned USAF report on the site selection procedure for the CSOC.

Subsequent to Site Survey No. 79-26, the three candidate sites were evaluated against operational and organizational factors. This evaluation resulted in Peterson AFB/Colorado Springs being selected as the preferred location for the CSOC. The operational and organizational factors are described in the abovementioned USAF document.

Table 2  
Summary of Environmental and Socioeconomic Impacts  
at  
Preferred and Alternate Locations

Environmental/Socio-economic Attribute	Location	Environmental Consequences
AIR QUALITY	Colorado Springs	Motor vehicle emissions could increase the total emissions in the Colorado Springs urbanized area by .2% (536 Tons per year) as a result of an estimated 62,490 average vehicular miles traveled by all the CSOC employees and their families.
	Albuquerque	Motor vehicle emissions could increase the total emissions in the Albuquerque urbanized area by .14% (523 Tons per year) as a result of an estimated 61,050 average vehicular miles traveled by all the CSOC employees and their families.
	Great Falls	Motor vehicle emissions could increase the total emissions in the Great Falls urbanized area by 1.9% (225 Tons per year) as a result of an estimated 26,660 average vehicular miles traveled by all the CSOC employees and their families.
	All Locations	CSOC diesel generators each produce 25 lbs/hr particulates, 24.2 lbs/hr sulfur dioxide and 364 lbs/hr nitrogen oxides. These emissions are in compliance with applicable State and local regulations. The emergency diesel generators are exempt from Environmental Protection Agency Rules and Regulations.

Table 2  
Continued

Environmental/Socio-economic Attribute	Location	Environmental Consequences
UTILITIES	Colorado Springs	<p>CSOC Facility: (Off-base)*            Water - extend existing supply line 2-3 miles            Natural Gas - extend existing supply line 6.5 miles (13 miles if supplied by City of Colorado Springs)            Electricity - extend transmission lines 5 miles            Wastewater Treatment - on-site treatment plant to be constructed</p>
	Albuquerque	<p>CSOC Facility: (On-base)**            Water - extend existing supply line .5 mile; additional 2.5 mile extension required if water is piped to antenna field.            Natural Gas - extend existing supply line 4 miles            Electricity - extend transmission line 2.5 miles; construct 1 substation            Wastewater Treatment - May require rehabilitation of existing Imhoff treatment facilities near the Manzano Area.</p>
	Great Falls	<p>CSOC Facility: (On-base)***            Water - Opt.A: extend line 1800'            Opt.B: extend line 3 mi.            Natural Gas - Opt.A: extend line 3 miles            Opt.B: extend line 2 miles            Electricity - Opt.A: extend line 1.75 miles + 1.5 miles off-base            Opt.B: extend line 1.5 miles + 1.5 miles off-base            Wastewater Treatment- extend sewer line 2 miles for Options A and B.</p>

\*All extensions noted are located on off-base property

\*\*All extensions noted are located on base property

\*\*\*All extensions noted are located on base property with exception of 1.5 miles of transmission line located off-base.

Table 2  
Continued

Environmental/Socio-economic Attribute	Location	Environmental Consequence
UTILITIES (continued)	All Locations	Regional: Adequate water, gas, power and wastewater treatment capacity.
ARCHAEOLOGICAL/HISTORICAL RESOURCES	Colorado Springs	Little likelihood of uncovering any cultural resources in vicinity of CSOC facility. Site will be surveyed in accordance with Executive Order 11593.
	Albuquerque	Several historical sites exist in close proximity to antenna field and associated access road. Proper layout of antenna field and road can avoid these sites. If Site No. 4 is determined in danger of accidental disturbance during construction, it would be fenced. Compliance with Executive Order 11593 is required.
	Great Falls	Little likelihood of uncovering any cultural resources at the CSOC antenna field. Site will be surveyed in accordance with Executive Order 11593.
SHORT-TERM CONSTRUCTION IMPACTS	Colorado Springs	<p>Grading:            Sect.24-Max. +10' cuts/fills required for parking lot; +20' needed for expansion of CSOC in future.</p> <p>Sect.26-Max. +5' cuts/fills</p> <p>Roads: Construct 2700' of 24' wide access road for Sect.26; 7980' for Sect.24. Pave perimeter patrol road. Pave 2.5 miles of Enoch Road. Right-of-way must be acquired to provide vehicular access to Sect.24.</p> <p>Utilities: Off-site trenching for underground utilities could create temporary inconvenience to traffic.</p> <p>Structures: Entire CSOC facility would have to be constructed, requiring about 2 yrs</p>

Table 2  
Continued

Environmental/Socio-economic Attribute	Location	Environmental Consequence
SHORT-TERM CONSTRUCTION IMPACTS (continued)	Albuquerque	<p>Grading: Insignificant at Manzano Area; max. +5' cut/fill at antenna field.</p> <p>Roads: Pave 1000' at Manzano Area; pave 1700' at antenna field; pave perimeter patrol road around antenna field only.</p> <p>Utilities: On-base trenching for underground utilities + 12,800' trench for cable</p> <p>Structures: Construct new Tech. and Powerplant Bldgs. only. Construct guardhouse at antenna field. Rehabilitate 6 existing buildings at Manzano.</p>
	Great Falls	<p>Grading: Opt.A-Insignificant at SAGE area, max.+6' cuts at antenna field.</p> <p>Opt.B-More extensive than Opt.A, parking lot will need +10'cut/fill.</p> <p>Roads: Opt.A-Reroute base interior roads in SAGE area, construct .5 mile access road to antenna field, pave 3 miles of base road, pave perimeter patrol road at both SAGE and antenna field.</p> <p>Opt.B-Pave 3 miles base road, pave 1600' access road to US 87/89, pave perimeter patrol road at one location only, improve access to US 87/89.</p> <p>Utilities: Opt.A-On-base trenching for underground utilities and 8700' of cable.</p> <p>Opt.B-On-base trenching for underground utilities.</p>

Table 2  
Continued

Environmental/Socio-economic Attribute	Location	Environmental Consequence
SHORT-TERM CONSTRUCTION IMPACTS (continued)	Great Falls (continued)	Structures: Opt.A-Construct new Tech. and Powerplant Bldgs. only, construct 2 guardhouses, demolish 10 existing bldgs Opt.B-Entire CSOC facility to be constructed, requiring about 2 yrs. A new base entry gate required at 87/89.
	All Locations	During grading operations heavy construction equipment would emit 239 lbs/day pollutants.
VISUAL/AESTHETIC CONCERNs	Colorado Springs	Antenna structures and CSOC buildings are partially visible from Hwy.94 and particularly from Enoch Road.
	Albuquerque	CSOC facility is not visible to any degree from public roads, or from residential developments.
	Great Falls	Antenna structures and CSOC buildings are visible from US 87/89 for several miles in either direction, and to a lesser degree from 52nd Street.
ELECTROMAGNETIC RADIATION	All Locations	All emitted radiation is orders of magnitude below 1 mw/cm <sup>2</sup> at ground level; however, power density could be increased due to reflection off other objects. This makes it essential to conduct field survey measurements after antenna installation to identify areas where restricted or prohibited access is found to be necessary.  A potential exists to activate EEDs on aircraft flying within 473' of S-band antenna. (This potential is greater at Great Falls due to the nearby runway and resulting aircraft activity.)

Table 2  
Continued

Environmental/Socio-economic Attribute	Location	Environmental Consequence
TRAFFIC	Colorado Springs	<p>CSOC traffic may add to existing congestion at Hwy. 94/Peterson Road intersection during peak am and pm hours; traffic conditions need to be reassessed after CSOC is in operation to determine success of car/van pooling, staggered work hours, and signalization improvement project. (See Mitigation Measure page I-4.)</p> <p>CSOC traffic will be inconvenienced by school buses on Hwy. 94 (requiring traffic to stop during pick up and unloading of school children); CSOC traffic will double present volume of traffic on Hwy. 94 thus increasing exposure of buses and students to potential accidents.</p> <p>CSOC traffic will probably generate pressure to expand Hwy. 94 to 4 lanes and to provide a second southerly route between Colorado Springs and the CSOC facility.</p>
	Albuquerque	CSOC traffic could slightly increase congestion at two of the five access gates to Kirtland AFB and may require additional control measures.
	Great Falls	<p>Opt.A-Malmstrom AFB traffic volume at main gate would double during peak am and pm hours.</p> <p>Opt.B-Ingress/egress traffic at US 87/89 would need a traffic signal plus other associated lane improvements. Also, the exiting pm CSOC traffic could be subjected to substantial delays unless dual exit lanes are provided between parking lot and US 87/89.</p>

Table 2  
Continued

Environmental/Socio-economic Attribute	Location	Environmental Consequence
PUBLIC SCHOOLS	Colorado Springs	Projected adequate capacity for CSOC students when all school districts are considered. May be certain districts (such as Ellicott, Palmer, and Peyton) that could be overloaded if substantial number of CSOC employees resided in their district.
	Albuquerque	Projected adequate capacity for CSOC students except in certain areas where rapid growth has caused overloading of schools.
	Great Falls	School district has plenty of school facilities (schools, classrooms, etc.) but may be required to re-open classrooms in certain elementary and junior highs by 1984; by 1985 the additional CSOC students may be sufficient to warrant re-opening of several elementary schools closed in recent years due to declining population.
HOUSING	Colorado Springs	Military - Family quarters and BOQ units have 2-4 month waiting period. Only 27 BAQ units are presently vacant. Civilian - Adequate number of housing units projected to be available; price range could limit housing choices for enlisted personnel. Influx of CSOC personnel should not reduce vacancy rates below locally acceptable levels.
	Albuquerque	Military - Family quarters and BOQ units have 1-month waiting period. BAQ units at Manzano could be re-opened to house CSOC personnel. Civilian - Adequate number of housing units projected to be available. Price range could limit housing choices for enlisted personnel. Influx of CSOC families could cause regional vacancy rate to drop below 2%.

Table 2  
Continued

Environmental/Socio-economic Attribute	Location	Environmental Consequence
HOUSING (continued)	Great Falls	<p>Military - Family quarters and BOQ units have average waiting period of 3 months. 260 BAQ units are presently vacant.</p> <p>Civilian - Sufficient housing units projected to be available. Price range may limit housing choices for enlisted personnel. Influx of CSOC personnel would help decrease present vacancy rate of 10%.</p>
GENERAL COST/REVENUE	Colorado Springs	<p>CSOC population could generate additional tax revenues for regional area including Federal funds for local school districts.</p> <p>CSOC may also generate minor costs to local school districts if classrooms need to be reopened in certain neighborhoods.</p>
	Albuquerque	<p>CSOC population may generate additional tax revenues for regional area including Federal funds for local school district.</p> <p>CSOC may generate minor costs to local school district if classrooms are re-opened at certain crowded neighborhood schools.</p>
	Great Falls	<p>CSOC population could generate additional tax revenues (with exception of sales tax) for the regional area, including additional Federal funds for the school district.</p> <p>CSOC could also generate costs to local school district as classrooms and possibly an elementary school, are re-opened to accommodate CSOC students.</p>

Table 2  
Continued

Environmental/Socio-economic Attribute	Location	Environmental Consequence
LAND USE PLANS, POLICIES AND CONTROLS	Colorado Springs	<p>CSOC location is 10 miles beyond presently planned growth area of Colorado Springs. In the absence of a General Plan, spot commercial development could occur along Hwy. 94 as a result of the CSOC.</p> <p>The presence of the CSOC would probably provide further impetus for development eastward from Colorado Springs.</p> <p>Livestock grazing or other farming activity would be prohibited on approximately 170 acres of fenced area within the CSOC complex.</p>
	Albuquerque	No impacts identified
	Great Falls	Either Opt. A or B would preclude construction of the Base Golf Course at the antenna field site.

## II. DISTRIBUTION LIST

The following is a list of agencies, organizations, and persons to whom copies of the Draft Environmental Impact Statement for the Consolidated Space Operations Center (dated October 1980) were sent:

Governor Bruce King Governor's Office Executive Legislature Bldg. Santa Fe, New Mexico 87503	Governor Richard D. Lamm 136 State Capitol Building 200 East Colfax Denver, Colorado 80203
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Bernalillo Planning Commission  
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Airport Advisory Committee  
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New Mexico Chapter  
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### III. PUBLIC COMMENTS

#### III.1 Respondents to the CSOC Draft Environmental Impact Statement

Copies of the Draft EIS were provided for review and comment to federal, state and local government agencies, and to the general public. Written comments were received from the following:

##### Federal Agencies

Department of Housing and Urban Development, Region VIII, Colorado  
Department of Housing and Urban Development, Region VI, Texas  
Department of the Air Force, Kirtland Air Force Base, New Mexico  
Department of the Air Force, Peterson Air Force Base, Colorado  
Department of Energy, Albuquerque Operations, New Mexico  
United States Environmental Protection Agency, Region VIII, Colorado  
Department of Transportation, Federal Aviation Administration, Texas  
Department of Transportation, Federal Aviation Administration, Colorado  
Department of the Interior, Office of the Secretary, Colorado

##### State Agencies

Colorado Division of Wildlife  
Colorado Office of Energy Conservation  
Colorado Department of Natural Resources, Geological Survey  
Colorado Division of Water Resources  
Montana Department of Highways  
State of New Mexico, Office of the Governor  
Colorado Division of Planning, Department of Local Affairs  
State Clearinghouse, Planning Division, New Mexico

##### Local Agencies

El Paso County Land Use Department  
Pikes Peak Area Council of Governments

##### Organizations

Colorado Historical Society

##### Individuals

Mr. Larry Ranieri, Helena, Montana

#### III.2 Comments and Responses

Comments received on the Draft Environmental Impact Statement, and the Air Force responses follow. The written responses are numerically keyed to the numbered comments.

F E D E R A L   A G E N C I E S

Comments and Responses

Comments: No. 1 through No. 60  
(Pages III-3 through III-25)

Responses: Pages III-26 through III-39



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
REGIONAL/AREA OFFICE  
EXECUTIVE TOWER - 1405 CURTIS STREET  
DENVER, COLORADO 80202

REGION VIII

December 2, 1980

IN REPLY REFER TO

8SOQ

Dr. Carlos Stern  
Office of the Secretary  
of the Air Force (SAF/MIQ)  
Pentagon  
Washington, D.C. 20330

Dear Dr. Stern:

Thank you for the opportunity to review and comment on the draft Environmental Impact Statement (EIS) of the Consolidated Space Operations Center (CSOC) at three candidate locations (Peterson Air Force Base/Colorado Springs, Colorado; Kirtland Air Force Base/Albuquerque, New Mexico; Malmstrom Air Force Base/Great Falls, Montana).

Your draft has been reviewed with specific consideration for the area of responsibility assigned to the Department of Housing and Urban Development (HUD). Since this proposal discusses sites which are within two HUD geographic regions, Denver and Fort Worth, it has been agreed by each to comment separately on the sites in their respective regions. The review considered the proposal's compatibility with local and regional comprehensive planning and impacts on urbanized areas. Within the area of indirect effects, we find this statement incomplete.

The EIS addresses the direct impact of the proposed 2,000 new jobs on the selected community. However, there would be two to seven additional supporting jobs for each new job created because of the CSOC. This would mean a population increase due to this project of between 15,000 and 35,000 persons, rather than the 6,100 you have estimated. This larger population should be taken into account in this EIS. Comments should also be made in relationship to Section 176(c) of the Clean Air Act and this larger population projection.

1

2

III-3

AREA OFFICE  
DENVER, COLORADO

2

There appears to be an adverse impact on the community of Great Falls, Montana because of the Air Forces' intention in the next several years to curtail other military activities not related to this project. If the CSOC were to be located at the Malmstrom Air Force facility and be coordinated with these intended curtailments, the cumulative impact on Great Falls of all proposed activities could be minimized. The ultimate site selection should be made considering this as a possible alternative.

3

There also appears to be a cumulative indirect impact on the Colorado Springs Area. Since both the Air Force and the Army are under the Department of Defense, the secondary impact of enlarging Fort Carson should be discussed in relationship to the CSOC.

4

If you have any questions regarding these comments, please contact Mr. Carroll F. Goodwin, Area Environmental Officer, at FTS 327-3102 here in Denver.

Sincerely,



Raymond D. McKinney  
Director  
Program Planning and Evaluation



REGION VI

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

FORT WORTH REGIONAL OFFICE

221 WEST LANCASTER AVENUE

P.O. BOX 2905

FORT WORTH, TEXAS 76113

IN REPLY REFER TO:

December 5, 1980

Deputy for Environment and Safety  
Office of the Secretary of the Air Force (SAF/MIQ)  
Washington, D. C. 20330

Dear Sir:

The Draft Environmental Impact Statement for the Consolidated Space Operations Center proposed for Peterson Air Force Base in Colorado Springs, Colorado, with alternate locations of Kirtland Air Force Base in Albuquerque, New Mexico, and Malmstrom Air Force Base in Great Falls, Montana, has been reviewed in the Department of Housing and Urban Development's Dallas Area Office and Fort Worth Regional Office and the following comments are applicable.

1. Cross-Reference to Incoming Inquiry.

The proposed action is to locate the Consolidated Space Operations Center in the Peterson Air Force Base/Colorado Springs area. The satellite control element of CSOC will perform communications, command and control service functions for orbiting spacecraft. The shuttle element of CSOC will conduct Department of Defense shuttle flight planning, readiness and control functions. The CSOC facility will require a new technical facility totalling about 370,000 square feet, support facilities of 100,000 square feet, an antenna field, and will have a labor force of about 2,000 persons with dependents for a total population of 6,100 persons.

2. HUD's Comment on the Statement.

a. The EIS favors the selection of the Peterson Air Force Base at Colorado Springs, Colorado, as the site for the CSOC and it appears that this decision was made due to operational advantages of being in the Space Defense Operation Center and not on environmental reasons. The negative aspects of the two operations sharing support task should be discussed in the EIS as well as the positive aspects.

5

b. The EIS as written does not convince a reader that the Colorado site is more environmentally desirable.

6

c. Positive aspects for the Albuquerque site are as follows:

(1) It will not promote strip commercial development.

- (2) It does not reduce the amount of land for agricultural uses such as livestock grazing.
- (3) It does not require any screening from public view.
- (4) Existing buildings may be rehabilitated for use which should reduce total project's cost. It also appears that less site development costs would be involved in streets and utilities.
- (5) Lesser impact upon local school system.
- (6) More military housing available.
- (7) Less air pollution from traffic generated by staff and employees.
- (8) Public transportation is available, however, the EIS does not inform us of this fact. 7

d. The EIS should provide a discussion on noise for diesel powered generators required at each site, for increase in traffic to be generated by employees and dependents, and for other noise sources. 8

e. The EIS should discuss wastewater requirements for each location and include the fact that EPA has made grants with a total of \$19,000,000 for the expansion of Albuquerque's wastewater treatment plant. 9

f. Also as a matter of information, HUD and the Economic Development Agency have awarded an Urban Development Action Grant to the City of Albuquerque. This grant includes the installation of enlarged sewers for an industrial area which is located immediately to the western boundary of the Kirtland and Municipal Airport. 10

3. HUD's Comment on the Proposal.

HUD recommends that the site be selected on the basis of minimum adverse environmental impacts due to noise, increased water requirements, increased wastewater treatment, additional school enrollments, air quality, increased traffic, demands on recreational areas, relocation, etc.

We understand that our Denver Office has sent you comments on the Colorado Springs site and the Great Falls site.

Sincerely,

*Warren K. McLaury*  
 Warren K. McLaury  
 Acting Environmental Clearance Officer



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 1606TH AIR BASE WING (MAC)  
KIRTLAND AIR FORCE BASE, NEW MEXICO 87117

9 DEC 1980

Carlos Stern, Ph.D.  
Deputy for Environment and Safety  
Office of the Secretary of Air Force  
Pentagon, Washington, D.C. 20330

Dear Dr. Stern:

Draft Environmental Impact Statement for Consolidated Space Operations Center has been reviewed for technical aspects and environmental impacts that effect Kirtland Air Force Base. Since we are not familiar with the situation at Colorado Springs/Peterson Air Force Base, or Great Falls/Malmstrom Air Force Base, we have concentrated our technical review primarily on the portions of the statement that address the Albuquerque/Kirtland Air Force Base area. Attached are our comments for your consideration.

Sincerely,

James R. HARD, Colonel, USAF  
COMINCHAF

1 Atch  
Comments

Cy to: HQ MAC/DEE  
HQ SD/DEV  
AFRCE/CR-ROV

Technical Comments for Specific Reference Paragraphs:

(1) Page II-4, Table 2, Utilities - Albuquerque.

Wastewater Treatment - On-site treatment plant to be constructed.

See page III-37, III.B.5.2 Wastewater Treatment Facilities. No wastewater treatment facilities are contemplated. Only a limited treatment facility would be constructed at the antenna complex if it were manned for twenty-four hours and then at a much reduced scope. 11

(2) Page II-5, Table 2, Archaeological/Historical Resources - Albuquerque.

Several historical sites in close proximity to antenna field. Site #4 is close to proposed access road to CSOC antenna field.

The location of Site #4 is an old 1904-1917 building foundation and does not restrict the location of CSOC antenna complex. Measures can be taken to protect these sites such as fencing or the physical layout of the complex and thus eliminate any disturbance or impact on the sites. The road mentioned is a dirt road. Kirtland is the only Base that performed an archaeological survey in 1979 and the survey encompassed the entire area where CSOC facilities and the complex would be located. 12

(3) Page II-6, Table 2, Construction - Albuquerque.

Utilities: On-Base trenching for underground utilities including 12,800' of trench for fiber optics or co-axial cable.

The distance from the built-up area could be less, depending upon alignment. See page III-28, Facility Site Plan. 13

(4) Page II-11, Paragraph II.C.1, Mitigation Measures - All Locations.

1. Incorporating instructions in the grading plans as to the procedure to be used in the event an archaeological/historical find is made. Such instructions should require notification of the State Historic Preservation Officer.

An archaeological survey must be performed in accordance with Executive Order 11593 at the site prior to undertaking any major federal action. 14

(5) Page II-11, Paragraph II.C.3, Mitigation Measures - Kirtland AFB/Albuquerque Location.

1. Encourage the use of Eubank Gate by CSOC employees.

CSOC personnel would use the five gates to enter Kirtland based on where they reside in the City and not solely because they are CSOC personnel.

2. To extent feasible, route all access roads and other CSOC structures away from already identified archaeological sites, particularly Site No. 4.

Measures can be taken to protect these sites such as fencing or the physical layout of the antenna complex and thus eliminate any disturbance or impact on the sites. 15

3. Encourage delivery of construction equipment/materials outside peak am and pm hours at the Base.

This mitigation measure is unrealistic. An example is concrete work which must be done during normal contractor working hours and during daylight.

(6) Page III-30, Paragraph III.B.3, Existing Traffic Environment.

The Albuquerque public bus system provides service throughout the City. The Albuquerque bus system, in addition, serves Kirtland and the main built-up portion of the Base. In conjunction with this system, the Base has a shuttle bus system that complements the public system on Base throughout the main built-up portion of the Base and could be expanded based upon demand. 16

(7) Page III-37, Paragraph III.B.5.2, Wastewater Treatment Facilities.

All sewage systems on Base are in compliance with National Pollution Discharge Elimination System Requirements imposed by the Environmental Protection Agency. (Last paragraph - last sentence)

Kirtland's wastewater treatment systems are in compliance with the Environmental Protection Agency and no NPDES permit is necessary. The Environmental Protection Agency cancelled the requirement for the permit on 12 May 1978. 17

(8) Page III-43, Paragraph III.B.9.2.1, Military Housing.

There is immediate housing available for all ranks on Kirtland. The proposed mobile home facility planned is for a Fam Camp Facility and not a resident trailer park. 18

(9) Page IV-14, Paragraph IV.A.3.2.2, Kirtland AFB/Albuquerque Location.

Wastewater treatment would be handled in the same manner at the CSOC facility as described for the Peterson AFB/Colorado Springs location.

This is not so. The wastewater treatment at Kirtland will include rehabilitating an existing Imhoff treatment facility. See page III-37, Paragraph III.B.5.2 and our comments #(1) and #(7). 19

(10) Page IV-16, Paragraph IV.A.4, Impact on Archaeological/Historical Resources.

Measures can be taken to protect these sites such as fencing or the physical layout of the antenna complex and thus eliminate any disturbance or impact on the site. The New Mexico State Historic Preservation Officer has already been notified of our sites and has been requested to visit Kirtland this year for an on site review.

20

(11) Page IV-17, Paragraph IV.A.5, Short-Term Construction Impacts.

If a significant number of construction workers are brought in from outside the area, the prime contractor would be responsible for providing temporary housing at the CSOC site. Mobile units (trailers) would be used for sleeping quarters and food preparation/serving facilities.

21

No temporary quarters would be established at CSOC construction site since the Base is adjacent to the City of Albuquerque.

(12) Page IV-19, Paragraph IV.A.5.2, Kirtland AFB/Albuquerque Location.

2. Grading for antenna pads, sewage lagoons, and perimeter patrol road.

The sewage lagoons should not be included for grading since an existing Imhoff treatment facility will be rehabilitated.

3(b). Trenching for 2.5 miles of water line from Manzano Area to Pennsylvania Avenue.

22

See Page IV-13, Paragraph IV.A.3.1.2. The antenna field requires only a small amount of water which can be provided by a 500 gallon storage tank. An alternative to the storage tank is to extend the water lines 2.5 miles from the Manzano area to the antenna field, a distance of 2.5 miles.

(13) Comments from Mr Parker, Sandia Laboratories.

One concern is that the 1000 feet clearance distance (Pg. IV-42) may be too small to insure that EED's in aircraft will not be prematurely. In some cases, aircraft do not provide any shielding to EED's. This conclusion should result in the same criteria used for "Exposed EED's on the ground". Hence, for both the S-Band and QLT systems, the  $10\text{mw/cm}^2$  level on pg. IV-26 for aircraft in-flight should be lowered to  $1.34$  and  $1.46\text{mw/cm}^2$  respectively. In addition, it is suspected that these systems may use Pulse Coded Modulation (PCM). If so, thermal stacking factors during tightly grouped pulse trains may enhance temperatures by large factors over those predicted by average power. The combination of these two factors could increase distances by a factor of 10 (from 500 feet to 5000 feet).

23

The graph in A-9 has not been changed to reflect the correct S-Band distance of 473 feet shown in TABLE 35.

## DEPARTMENT OF THE AIR FORCE

HEADQUARTERS AEROSPACE DEFENSE CENTER

PETERSON AIR FORCE BASE, CO 80914



REPLY TO  
ATTN OF XP

16 DEC 1980

SUBJECT Proposed Consolidated Space Operations Center (CSOC) Draft Environmental Impact Statement (DEIS)

TO SAF/MIQ (Dr Carlos Stern)

1. We have reviewed the DEIS for the proposed CSOC and the following comments are provided.

2. Vehicular Traffic. The DEIS singles out Colorado Springs because traffic would be concentrated at the sole access roads (Highway 94 and Enoch Road) (page i). We argue that this traffic impact deserves being highlighted no more than that at the Albuquerque site.

a. In Albuquerque, CSOC traffic would likely use the Wyoming and Gibson gates to Kirtland AFB (Sec III.B.3). This would increase peak hour traffic flow at these two gates by at least 6.0% and as much as 8.8% (Table 24). These same two gates carry more than one-half the 24 hours traffic volume at the base. CSOC traffic on Kirtland AFB would use Pennsylvania Avenue as the sole access (for 4.5 miles) to the CSOC building complex (Sec IV.A.1.3), Fig 6, 7, and 9). The same problems anticipated on Highway 94 and Enoch Road in Colorado Springs should be anticipated on Pennsylvania Avenue where traffic is already "relatively slow" with "moderate congestion." Furthermore, it should be expected that the outbound traffic will be heavily congested by the time it reaches the Wyoming and Gibson gates.

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b. Locating the CSOC at Malmstrom AFB will double peak hour traffic by the 2nd Avenue gate (Sec IV.A.1.4.1). It would increase peak hour traffic flow by two and one-half times on US Highway 87/89 if Option B were used (Sec IV.A.1.4.2).

3. Air Quality. The summary indicates that air quality would be degraded in Colorado Springs and Albuquerque equally and at Malmstrom AFB to a greater degree (page i).

a. The statistics used for Colorado Springs in Tables 4 and 6 are from 1974. Comparable statistics for Albuquerque in Table 14 are more current and include contaminants not reported for Colorado Springs. This could lead to a charge that Colorado Springs' air quality has not been studied adequately.

25

b. Both Colorado Springs and Albuquerque have failed to meet federal standards for carbon monoxide, suspended particulates and photochemical oxidants (ozone) (Sec III.A.4 and III.B.4). However, the ozone standard has been revised, and Colorado Springs will be in compliance.

26

c. Where comparable 1977 data is available, hydrocarbon emissions totalled 26,511 in Colorado Springs and 34,753 in Albuquerque (Tables 7 and 14). Again, where comparable data exists, Colorado Springs was in violation of the federal 8 hour carbon monoxide standard once in 1977 and seven times in 1978 (Sec III.A.4); Albuquerque was in violation 57 times in 1977 and 15

times in 1978 (Table 15). The air quality environment for Albuquerque is described in more negative language than that used for Colorado Springs (Sec III.B.3 and III.B.4). The Albuquerque problem is aggravated by the surrounding topography -- it is located in a basin -- where pollution tends to stay.

27

d. The CSOC project would have a relatively greater negative impact on the air quality of Colorado Springs (emissions increased .2%) than on Albuquerque (up .14%) (Table 2). However, Albuquerque's air is worse to begin with and any worsening would push it closer to the danger level. Furthermore, locating the CSOC in Albuquerque would bring new employees and their vehicles into an already densely occupied area (Kirtland AFB). In Colorado Springs, the CSOC would be located some ten miles from densely inhabited areas.

e. The statement on page III-18, para III.A.8 that "Large diurnal (daily) temperature variations" exist for Colorado Springs is not substantiated by the data on page III-40. No mention is made of Colorado Springs' large number of clear days like it is in the Albuquerque meteorology section. Colorado Springs, in fact, has more than one-third clear days and when combined with partly cloudy days it equals 250 days per year on the mean for about 75% sunshine. The statement that "several times per year local roads will be unpassable due to snow" is also questionable.

28

4. Visual Impact. The CSOC buildings and antennas would be visible from public highways in Colorado Springs and Great Falls (page ii). The facility would not be visible in Albuquerque from public areas (Table 2 and Sec IV. A.6). While we have no ground to question the latter conclusion, we note that the DEIS does not contain photographs of the Albuquerque site as it does of the other two (Figures 17 and 19). We believe photographs of the Kirtland site should be included to illustrate the point that antennas remoted to the top of the mesa at Kirtland will be highly and publicly visible -- particularly from the "Future Tijeras Arroyo Corridor" as listed on pages III-30 and III-32 for Albuquerque. Even though they may be visible from public areas, the CSOC sites at Colorado Springs and Malmstrom AFB Option B have the advantage of being built from the ground up. This allows the buildings and landscaping to be specially designed to be aesthetically pleasing. This advantage is not available at the Albuquerque site where six existing buildings will be used in addition to two new facilities. It can be argued that such a clutter of eight buildings will be less appealing visually than the two or three modern facilities at Colorado Springs. Finally, we question the premise implied by the DEIS' conclusion that a visual intrusion on an Air Force installation is acceptable but the same intrusion in the civilian community is unacceptable. Blight is blight even when hidden in a military installation.

29

5. Growth Patterns. The fact that the CSOC in Colorado Springs would be outside the planned and desired growth pattern is desirable for security as well as economic reasons. Perhaps it can be argued that the rapid growth forecast over the next twenty years for Colorado Springs will be an eastward growth since expansion is restricted on the north by the Air Force Academy,

30

on the west by the front range an' on the south by Fort Carson.

b. Electromagnetic Radiation. The alleged danger of electromagnetic radiation was the basis of the environmental lawsuits which were filed against the Air Force to halt the PAVE PAWS sites at Otis AFB, Massachusetts and Beale AFB, California. Neither case went to trial, mainly because the groups bringing the suits did not have the money to see much of an effort through. The issue is not settled, but it may be dead.

a. The present Maximum Permissible Exposure Level (MPEL) which is considered safe in the US for persons exposed as part of their jobs is 10 mw/cm<sup>2</sup> (Sec IV.A.7.1). This standard has been under review for some time and could likely be lowered to 1 mw/cm<sup>2</sup>. The stated occupational standard in the Soviet Union is .01 mw/cm<sup>2</sup>. The strictest stated standard is the Soviet one for nonoccupational exposure of .001 mw/cm<sup>2</sup>. It is open to question whether the USSR actually enforces these standards, but most of the research in the field is from Russia and Poland.

b. Of all the standards cited above, the only one exceeded by the proposed CSOC antenna field is the Soviet nonoccupational one of .001 mw/cm<sup>2</sup>.

(1) The DLT-NE and DLT-E will emit .0012 mw/cm<sup>2</sup> at a distance of 1,600 feet; the S-band will emit .0027 mw/cm<sup>2</sup> at 700 feet (Table 31). 31

(2) The maximum cumulative ground level power density at Colorado Springs would be .0034 mw/cm<sup>2</sup> at the antenna field fenceline. It drops off beyond that (Table 32). At Albuquerque, the maximum fenceline density would be .00089 mw/cm<sup>2</sup> (Table 36). At points beyond the fenceline, the level increases due to increased elevation.

(3) At selected locations beyond the Colorado Springs site fence-line where the public is likely to be, the maximum calculated levels are .00058 mw/cm<sup>2</sup> at the Benedict Ranch (5,200 feet from the antennas) and .00028 mw/cm<sup>2</sup> on Highway 94 (7,000 feet from the antennas) (Table 33). Both meet all standards. At Albuquerque, due to rising elevations, power density would reach a level of .0023 mw/cm<sup>2</sup> at a distance of 4,900 feet and .045 mw/cm<sup>2</sup> at a distance of 6,100 feet (Table 36). Both locations are within the boundaries of Kirtland AFB. At Malmstrom AFB, a level of .0013 mw/cm<sup>2</sup> has been calculated at the Base Riding Stable and Gun Club at a distance of 3,480 feet from the antennas (Table 37).

(4) The density level on CSOC building rooftops at Colorado Springs has been calculated at a high of .026 mw/cm<sup>2</sup> on a building 2,200 feet from the antenna field (Table 34). Even though the Albuquerque site would use existing buildings, no rooftop levels have been calculated (Sec IV.A.7.4.1). 32

c. The danger of electromagnetic reaction to electro-explosive devices (EED) is not cited as prevailing at any one of the three sites. At each site, aircraft will be kept at least 1,000 feet from the antenna field. 33

It should be noted that the Albuquerque and Malmstrom AFB sites are located on Air Force Bases with active runways while Colorado Springs is not. | 33

7. Socio-Economic Factors.

a. In our opinion, the presence of several known historical sites in close proximity to the Albuquerque antenna field is of sufficient merit to be highlighted (Sec III.B.6 and IV.A.4). This could lead to interruptions of project development. If selection of the Albuquerque site were announced, interested historical and anthropological groups could likely demand that no work begin until they have had a chance to explore for and develop potential archaeological sites. If dwelling sites were uncovered, work on the antenna field could be further delayed or threatened totally. Considerable public interest should be expected as the antenna field borders the Isleta Reservation (Fig 6). | 34

b. The 1980 overcapacity in the school system at Colorado Springs of 12,017 (Table 39), is greater than that predicted in 1985 for Albuquerque of 6,961 (Table 40). Therefore, the Colorado Springs school system should be in a better position to absorb the 2,160 additional pupils brought by CSOC (Table 38). Locating CSOC in Great Falls would overburden the school system (Table 42). | 35

c. The present vacancy rates for rental homes and apartments is higher in Colorado Springs (7.75%) than Albuquerque (4.2%), although both are lower than Great Falls (10.0%). However, the total number of vacant family living units in Great Falls projected for 1985 (2,722) is lower than Colorado Springs (3,634) or Albuquerque (3,459) (Table 44). By all these standards, the Colorado Springs housing market should be in a better position to accommodate the CSOC families. The large number of military family units at Kirtland AFB and Malmstrom AFB is of limited value as most of the CSOC personnel will be contractor and civilian employees (1,524) rather than military (318) (Table 1). | 36

d. The overall cost of living index in Colorado Springs (94.5) and Great Falls (94.9) is substantially lower than that of Albuquerque (105.9). The differences in cost indexes for utility services is even more marked: Colorado Springs - 61.3, Great Falls - 66.3, and Albuquerque - 114.7 (Table 12). Also for an equitable treatment of economic factors (para III.B.9.4, page III-46), a statement should be added -- like that in the Colorado Springs section -- that the cost of living index is expected to increase as new industry locates in Albuquerque. | 37

e. The word "affordable" is used to describe Colorado Springs housing, but not used in connection with the other two locations. This gives the impression that Colorado Springs is probably more expensive although Table 12 on page III-25 clearly shows Albuquerque to have the highest cost of living index (11.4 higher than the other two sites). As in other instances noted above, the wording tends to make Albuquerque look better when, in fact, it is worse. | 38

8. Additional comments for accuracy/clarity:

a. The terms "SOC" and "SOPC" used on page 1-1 are no longer current. Respectively, the correct terms are Satellite Control Element (SCE) and Space Shuttle Control Element (SSCE). 39

b. Page II-1, paragraph II.A, second paragraph should not refer to the North American Air Defense Command, but the Aerospace Defense Command should be used. The SPADOC supports an ADCOM specified command mission in support of NORAD. NORAD, itself, does not have a space defense mission. 40

c. The personnel figures contained on page II-1, paragraph II.A, fourth paragraph and Table I should be described as "soft numbers." Based on SAF guidance of 6 Nov 80, the civilian-military mix is not firm. 41

d. Note that the overall conclusion stated on page iii states that each proposed CSOC site is favorable; however, the body of the report tends to be biased towards the Albuquerque site. 42

e. Paragraph IV.B.1, page IV-56, should be amended to include reference to the 19 Feb 80 letter from the Chairman of the Pikes Peak Area Council of Governments which fully endorses the siting of the CSOC in El Paso County. 43

f. Paragraph I of page III-7 should be deleted. Coal mining operations and the need for coal trucks to cover their loads is not relevant to CSOC operations. The mining and transport of coal in the region has nothing to do with CSOC operations. 44



WILLIAM R. KENT Colonel, USAF  
Asst DCS/Plans, Policy, Programs  
and Requirements



**Department of Energy  
Albuquerque Operations  
Sandia Area Office  
P.O. Box 5400  
Albuquerque, New Mexico 87115**

**DEC 15 1980**

Deputy for Environment and Safety  
Office of the Secretary of the Air Force (SAF/MIQ)  
Washington, D. C. 20330

Dear Gentlemen:

Enclosed are comments on the Draft Environmental Impact Statement (EIS), on the Consolidated Space Operations Center's possible location on Kirtland Air Force Base, from Sandia National Laboratories and the U. S. Department of Energy's Albuquerque Operations Office. Sandia National Laboratories and DOE are both tenants on Kirtland Air Force Base.

Sincerely,

*Gil E. Cordova*  
Gil E. Cordova  
Area Manager

Enclosures:

Memo, Barncord/Cordova, dtd. 12/11/80  
Memo, Roeder/Cordova, dtd. 11/14/80

DATE NOV 1 1980

U.S. DEPARTMENT OF ENERGY  
**memorandum**

REPLY TO  
ATTN OF WOH:ARG

SUBJECT Draft Environmental Impact Statement for a Consolidated Space Operations Center (CSOC), Kirtland AFB

TO G. E. Corcova, Area Manager, SAO

We have reviewed subject Statement per your request of November 10, 1980, and offer the following comments:

Personnel from SNLA extensively travel the Coyote Springs Road. We note that the antenna field would be constructed adjacent to Coyote Springs Road should Kirtland AFB become the selected site for CSOC. Some discussion should be included in paragraph IV.A.1.3 on possible travel delays resulting from CSOC operations, if any. In addition some discussion regarding EMP impacts on personnel using the Coyote Springs Road should be addressed in paragraph IV.A.7.4. Specifically, would the power densities identified in Table 36 create problems for personnel wearing pacemakers.

45

We appreciate the opportunity to comment on subject Statement. Should additional clarification be required in reference to our comments, please contact Mr. Alex Griego at 846-1108.

*Jack R. Roeder*  
Jack R. Roeder, Director  
Operational Safety Division  
Albuquerque Operations Office

Sandia National Laboratories

date

Dec 11 1980

Albuquerque, New Mexico 87185

to G. E. Cordova, Manager, DOE/SAO

from

*C. R. Barncord*  
C. R. Barncord, 3200

subject Draft Environmental Impact Statement for a Consolidated Space Operations Center, Kirtland Air Force Base East

Ref: Memo, G. E. Cordova to C. R. Barncord, dtd 11/10/80, same subject

The subject Draft Environmental Impact Statement (DEIS) has been reviewed. Operations of the Consolidated Space Operations Center (CSOC) are, ostensibly, compatible with those of Sandia National Laboratories, Albuquerque (SNLA). Unlike KRZY's proposed 100 KW broadcast-band antennas aimed directly into SNLA's technical area, CSOC's will use upward-pointing, narrow beam antennas operating at less disruptive high frequencies; thus, the problems are quite different. The specific comments that follow, listed under the various areas of concern, relate mainly to the possible effects of CSOC's activities on SNLA's operations.

Personnel Hazards

In general, CSOC's operations would have no significant negative impact on the health of SNLA employees. The calculated maximum EMP power densities generated from the CSOC antenna field that may be encountered by Sandia employees at ground levels are less than the current and proposed more restrictive health standards. Even in the event of a worst case failure mode, the health standards would not be exceeded.

46

The slight degradation in air quality resulting from increased commuter automobile traffic entering and leaving KAFB would be mitigated by SNLA's carpool coordination program. The addition of CSOC personnel in the general location of Technical Areas III and V would broaden that general area's "rider base" thereby producing a new source of possible matches for forming new car-pools, thus minimizing air pollution, traffic congestion, and gasoline consumption.

47

Electroexplosive Devices (EED) Initiation

An EED initiation associated with ground level installations is highly unlikely. The DEIS deals in average power transmission levels. EED initiation is dependent on peak power pulses or pulse trains. It is reasonable to assume, however, that there may be peak pulses in excess of average power transmission levels. The accumulative effect of these peak pulses could result in thermal stacking factors which effectively raise the bounding estimates relative to EEDs. However, it is felt that the adjusted level would be less than the 1-2mw/cm<sup>2</sup> level required to initiate EEDs. No problem, therefore, is foreseen in this area.

48

RF Interference

No immediate interference problems are identified with the listed CSOC frequency allocations. Sandia operates at about 30 frequencies in the general frequency region of interest (1-30 GHz). In the event of future frequency expansions by either Sandia or CSOC, the environmental impacts would be reevaluated at that time.

49

General

According to subject document, KAFB stops just east of the Manzano Area (Figure 6, p III-27), and does not include the Forest Service and Bureau of Land Management withdrawal areas to the east. These withdrawal areas are parts of KAFB and include some important facilities. The analysis included in this response covers facilities located in these areas. No problem is foreseen in these areas or in any other areas of concern discussed in the DEIS.

50

FEM:3212:dc

## Copy to:

1 Morgan Sparks  
2 W. J. Howard  
1500 W. A. Gardner  
1700 W. C. Myre  
3000 R. B. Powell  
3200 C. R. Barncord  
3300 P. B. Mossman, MD  
3400 D. S. Tarbox  
3500 J. R. Garcia  
4500 E. H. Beckner  
3212 Day File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

1860 LINCOLN STREET

DENVER, COLORADO 80295

DEC 3 0 1980

Ref: 8W-EE

Mr. Carlos Stern  
Deputy for Environment and Safety  
Office of the Secretary  
of the Air Force (SAF/MIQ)  
Pentagon  
Washington, D.C. 20330

Dear Mr. Stern:

The Region VIII and Region VI offices of the Environmental Protection Agency have completed a review of the Consolidated Space Operations Center (CSOC) draft Environmental Impact Statement (EIS) and offer the following comments for your consideration.

Generally, the environmental impacts are clearly presented and discussed. However, a determination relative to Section 176(c) of the Clean Air Act will have to be made for at least the preferred Colorado Springs site. As you know, Colorado Springs is a non-attainment area relative to both total suspended particulates and carbon monoxide. Section 176(c) of the Clean Air Act requires that a Federal Agency make a finding that a proposed project is in conformity with the State Implementation Plan (SIP) prior to approving the proposed action. For Colorado Springs, this will involve contacting the Pikes Peak Council of Governments and the State of Colorado, Department of Health. The final EIS should contain the Section 176(c) determination.

51

According to the procedures EPA uses to rate draft EIS's, the CSOC draft EIS will be listed in the Federal Register as LO-2. This means that we have no objections to the project as proposed, but it is necessary that the requested 176(c) determination be included in the final EIS. If you have any questions regarding our comments, please contact Dennis Sohocki at FTS 327-4831.

Sincerely yours,

  
Roger L. H. Halls  
Regional Administrator

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

SOUTHWEST REGION  
P O BOX 1689  
FORT WORTH, TEXAS 76101



DATE December 19, 1980  
IN REPLY REFER TO ASW-530  
SUBJECT INFORMATION: Draft EIS - Consolidated Space Operations Center  
FROM Chief, Airspace and Procedures Branch, ASW-530  
TO Lt. Col. William M. Whorton  
Air Force Representative, ASW-900

We have reviewed the draft EIS for the subject project and offer the following comments.

The area of the proposed CSOC antenna field facility at Kirkland AFB is contained within the military reservation property at approximately latitude 34°59'00", longitude 106°30'00" with the highest ground elevation at 5,802 feet AMSL.

The site is located outside the airspace utilized for instrument approach procedures to Albuquerque International Airport and beyond the airspace utilized for traffic pattern operations. Therefore, there should be no adverse effect on terminal air traffic operations.

The site underlies Victor Airways 12S, 68N, and 60S. These airways have a minimum obstruction clearance altitude (MOCA) of 10,000 feet AMSL. Assuming that any antenna constructed at the site will be 200 feet AGL or less, the maximum height to be protected would be 7,002 feet AMSL (5,802 feet AMSL + 200 feet AGL = 6,802 feet AMSL + 1,000 feet = 7,002 feet AMSL). Aircraft operating in this area would be expected to remain at the MOCA or higher until in the terminal phase of their flight. Therefore, there should be no adverse effect on en route air traffic operations.

We are not clear on how it is proposed to restrict air traffic from traversing within 1,000 feet of the site. If the proposal is to restrict military traffic, it is feasible. If the proposal is to restrict all traffic, it does not appear feasible.

We have attached the draft EIS as you requested.

A handwritten signature in black ink, appearing to read "Ralph L. Frick".

Attachment

cc:  
ABQ ADO (Attn: Bill Howard), w/o attachment

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53

**DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION**

DATE DEC 12 1980  
IN REPLY REFER TO ARM-539  
SUBJECT ACTION: Draft Environmental Impact Statement (DEIS), Consolidated Space Operations Center  
FROM Chief, Air Traffic Division, ARM-500  
TO Joseph R. Davis, Major, USAF  
Air Force Representative, CE/GL/RM FAA Regions

ROCKY MOUNTAIN REGION  
10455 EAST 29TH AVENUE  
AURORA COLORADO 80010



DEC 18 13 16 80

We have reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Consolidated Space Operations Center (CSOC). The Rocky Mountain Region, Air Traffic Division, has no objections to the subject DEIS. However, we offer the following comments in regards to the Great Falls, Montana, and Colorado Springs, Colorado, site for your consideration:

Great Falls, Montana Site

Due to anticipated electromagnetic radiation, which could detonate certain explosive devices, the establishment of a prohibited area up to 1 mile in diameter and from the surface to 2,500' above ground level appears mandatory. This area may be reduced based upon final engineering determinations.

The establishment of this prohibited area could require the closure of runway 2/20 at Malmstrom Air Force Base. This will be dependent on exact location of antennas in relationship to the subject runway.

54

Colorado Springs, Colorado Site

A prohibited area up to 1 mile in diameter and from the surface to 2,500' above ground level would be mandatory at this site also. The location depicted would possibly require the alteration of Federal Airway V83 southeast of Colorado Springs. Although this would require rulemaking actions to alter the airway, it is anticipated that the adverse effect upon air navigation would not be substantial.

At both sites there is potential for interference with established radar microwave link systems (RML's). However, until an exact location is established, this cannot be determined.

55

The items identified are based upon maximum effects anticipated. When a final site location is determined, a more indepth analysis can be conducted.

If we may be of any further assistance, please advise.

A handwritten signature in black ink, appearing to read "F. L. Cunningham".



## United States Department of the Interior

### OFFICE OF THE SECRETARY

Building 67, Room 688  
Denver Federal Center  
Denver, Colorado 80225

NO REPLY  
REFERRED

ER 80/1381

December 29, 1980

Mr. Carlos Stern  
Deputy for Environment and Safety  
Office of the Secretary of the Air Force (SAF/MIQ)  
Department of the Air Force  
Washington, D.C. 20330

Dear Mr. Stern:

We have reviewed the draft environmental impact statement for Consolidated Space Operations Center, Peterson Air Force Base (AFB), El Paso County, Colorado, or Kirtland AFB, Bernalillo County, New Mexico, or Malmstrom AFB, Cascade County, Montana. The following consolidated comments were provided by agencies of the U. S. Department of the Interior.

### FISH AND WILDLIFE AND VEGETATION

This document does not adequately describe the flora and fauna that may be found at each of the alternative sites. In addition, the document must have an adequate description of the impacts that are expected as a result of the project. A proposed mitigation plan to offset any unavoidable losses to the fish and wildlife resources should also be included.

There is no indication in the draft statement that the requirements of the Endangered Species Act have been met. Section 7(c) of the Endangered Species Act, 87 Stat. 834, as amended, requires the Air Force to contact the Secretary of the Interior, through the U. S. Fish and Wildlife Service (FWS), whether any listed or proposed endangered or threatened species may be present at each construction project site. FWS defines construction projects to include only those construction activities that are major Federal actions significantly affecting the quality of the human environment. These projects are normally differentiated as those construction activities which require the preparation of an environmental impact statement. Construction projects are those designed primarily to build or erect man-made structures as buildings, roads, pipelines, and the like. The Air Force's request should be sent to the Area Manager, U. S. Fish and Wildlife Service, which has jurisdiction in the area of the proposed construction.

56

In the case of Peterson Air Force Base, Colorado, the request should be sent to the Area Manager, U. S. Fish and Wildlife Service, Federal Building, Room 1311, 125 South State Street, Salt Lake City, Utah 84138; for Kirtland Air Force Base, New Mexico, to Area Manager, U. S. Fish and Wildlife Service, 2953 West Indian School Road, Phoenix, Arizona 85017; and for Malmstrom Air Force Base, Montana, to Area Manager, U. S. Fish and Wildlife Service, Federal Building, Room 3036, 316 North 26th Street, Billings, Montana 59101.

If the Fish and Wildlife Service advises that such species may be present in the area of the project, the Air Force is required by Section 7(c) to conduct a biological assessment to identify any endangered or threatened species which are likely to be affected by the construction project. The assessment is to be completed within 180 days, unless a time extension is mutually agreed upon. No contract for physical construction may be entered into and no physical construction may start until the biological assessment is completed. 57

In the event that the conclusions drawn from the biological assessment are that endangered or threatened species are likely to be affected by the construction project, the Air Force is required by Section 7(a) of the Endangered Species Act to initiate the consultation process on listed species and to confer on proposed endangered and threatened species.

Page III-26, Item III B1, paragraph 3: It is stated here that hunting is permitted in the mountains east of Albuquerque for deer, elk, and bighorn sheep. This should be changed to reflect that hunting is restricted to archery hunting and that elk are not known to occur there. 58

#### CULTURAL RESOURCES

We would have no objection to the preferred location, Peterson Air Force Base, or Alternative 2, Malmstrom AFB. If Alternative 1, Kirtland AFB is chosen, we suggest that the access road be placed on an alignment which avoids impacts to Archeological Site #4. 59

If archeological materials are discovered during construction, the Secretary of the Interior should be contacted through the Departmental Consulting Archeologist, HCOS, Interagency Archeological Services, at 202-343-7105. In addition, the State Historic Preservation Officer may be contacted.

WATER

The statement would be enhanced by including an assessment of the anticipated impacts on surface water drainage patterns at each of the alternative sites.

60

Sincerely Yours,



Robert F. Stewart  
Regional Environmental Officer

RESPONSE TO COMMENTS  
FROM FEDERAL AGENCIES

Department of Housing and Urban Development, Region VIII, Colorado

1. We do not agree that the indirect job impact would be as great as suggested (i.e., 2 to 7). Our models of analysis and previous experience suggest that a CSOC-related net employment multiplier would be between 0.5 and 1.0. The local labor force would fill the major portion of these new jobs, resulting in a decrease in unemployment. Family members (wives, husbands, working-age children) of CSOC employees also would become part of the labor pool that would be able to take advantage of indirect job opportunities brought about by the CSOC. Thus, a significant population increase to fill indirect job openings is not expected to occur.

2. See response to Comment No. 51, page III-36.

3. The curtailment at Malmstrom AFB (inactivation of the Semi-Automatic Ground Environment facility) scheduled to occur on about September 1982, was evaluated for economic impacts in an Environmental Assessment dated 29 January 1979. Air Force planners have been fully cognizant of this information which also will be available for consideration by the final decision-makers of the CSOC siting.

4. An Environmental Impact Statement (EIS) on continuing operations of Fort Carson that is currently being processed by the U.S. Army projects an increase of approximately 2450 personnel in increments over the period 1979 to 1985. The induced earnings impact was estimated to equate to approximately 3000 jobs with an average annual income of \$19,000. At the current rate of growth, the Colorado Springs metropolitan area civilian labor force should increase by about 20,000 over the next five years, thus largely accommodating the secondary job impacts of both the Army and CSOC action.

Department of Housing and Urban Development, Region VI, Texas

5. The Draft EIS does state that the Peterson AFB/Colorado Springs location is the preferred site for the CSOC because of the "unique operational advantages which accrue from its proximity to related activities, namely the Space Defense Operations of the NORAD at the Cheyenne Mountain Complex". The Draft does not attempt to evaluate either the positive or negative internal operational aspects of the CSOC program as these are not within environmental, health, safety and socioeconomic areas normally addressed in an EIS.

6. It is not the intent to portray the Colorado Springs site as the most environmentally desirable. The adverse impacts identified for each of the candidate sites are not considered significant although there are different impacts at each location. The Draft EIS serves the purpose of identifying and evaluating these impacts and does not attempt to rank the three candidate locations as to their "environmental desirability".

7. The Draft EIS mentions that public transportation is available in Albuquerque (see page III-30, paragraph 6 of the Draft EIS), but failed to mention the on-base shuttle bus system. Also, see response to Comment No. 16.

8. The Draft EIS does not address those impacts considered insignificant such as noise from emergency diesel generators and traffic. The generators operate only 15 minutes each month for check-out purposes and in the case of a power outage they are not expected to run for more than one hour. It is obvious that noise from this source is inconsequential except that employees exposed to this source of noise will have to comply with applicable safety standards.

8. Continued . . .

An incremental increase in traffic noise on major arterials would occur at all three locations; this increase would be indiscernable over the ambient levels now existing. However, at the Colorado Springs location, highway noise on Highway 94 would noticeably increase during morning and evening rush hours as a result of the potential addition of 1200 CSOC vehicles (during each peak period). The lack of urban development along Highway 94 at the present time minimizes the effect of traffic noise. At such time that urban development in the High Plains area east of Colorado Springs is proposed, the impact of highway noise existing at that time and that projected for the future under build-out conditions, should be evaluated .

9. Wastewater requirements are discussed in detail in the Draft EIS in Sections III.A.5, III.B.5, III.C.5 and IV.A.3.2. It is so noted that EPA has granted a total of \$19,000,000 for the expansion of Albuquerque's wastewater treatment plant.

10. It is so noted that HUD and the Economic Development Agency have awarded an Urban Development Action Grant to Albuquerque for enlarging sewers for the industrial area located immediately to the west of the base. This sewer system program does not, however, have any direct bearing on the CSOC facility.

Department of the Air Force, Kirtland Air Force Base, New Mexico

11. The wastewater treatment system near the Manzano area will be used for handling CSOC wastewater. This existing facility may require rehabilitation and this would be determined during the design phase of this project. The Draft EIS was in error in stating that a new on-site treatment facility would be constructed. No sewage treatment facility is planned for the remote antenna site.

12. The road adjoining Site No. 4 is presently a dirt road, but this would be paved in the event CSOC were located at the Kirtland AFB location. Depending on the final layout of the CSOC antenna field and access roads, fencing of Site No. 4 could be considered to avoid accidental disturbance during construction activities.

13. Preliminary engineering estimates indicate a maximum of 12,800 lineal feet of trench would be required for the coaxial or fiber optics cable. This may vary depending on the outcome of detailed layouts of the antenna field at which time precise alignment of the trench would be established.

14. The referenced mitigation measure is intended to serve as notice to any grading contractors employed on the CSOC project as to the course of action to be taken in the event any artifacts or other cultural discoveries are made during grading of the site. The requirements spelled out in Executive Order 11593 are not listed in the Draft EIS because compliance with it by the Air Force is mandatory.

15. While it is recognized that CSOC personnel would tend to use those gates which would provide the most direct access to their homes, it is nevertheless recommended that CSOC employees be encouraged by CSOC management to use the Eubank Gate to avoid traffic delays and adding to existing congestion at the other base gates.

See response to Comment No. 12 with respect to the archaeological site.

15. Continued . . .

Based on information received from Kirtland AFB, contractors typically start their work crews earlier and schedule their quitting times earlier to avoid the base rush hours. Additionally, heavy equipment deliveries (such as wet mix) are scheduled to arrive at non-peak times. Contractor personnel also have a special entrance on Eubank Avenue for obtaining clearances and escorts as needed. These measures are in effect to minimize congestion at the base during peak hours. It is the intent of the proposed mitigation measure to continue with this apparently standard procedure at Kirtland AFB.

16. The Draft EIS was in error in omitting a statement to the effect that the base has a shuttle bus system that complements the public system, and that the shuttle bus service could be expanded to serve the CSOC facility depending upon the demand for this service.

17. It is so noted that Kirtland's wastewater treatment systems are presently in compliance with the Environmental Protection Agency and no NPDES permit is necessary.

18. The Draft EIS was in error with reference to the intended use of the mobile home facility. It is so noted that this facility is intended as a Family Camp and not for use as a resident trailer park. This does not materially affect the conclusions drawn in the Draft EIS, however.

19. See response to Comment No. 11.

20. See response to Comment No. 12. It is so noted that the New Mexico State Historic Preservation Officer will be visiting Kirtland in the coming year to view the identified archaeological sites on the base.

21. The Draft EIS intended to evaluate 'worst case' situations and therefore determined the impacts if all of the construction workers were brought in from outside the Albuquerque region. The prime contractor could opt to establish a construction camp on-site to house and feed construction personnel. It is acknowledged, however, that extensive temporary living quarters are available in the Albuquerque area. In addition, it is quite likely that a substantial portion of the construction workers would be hired from the residential population of the Albuquerque region and would therefore not require temporary quarters.

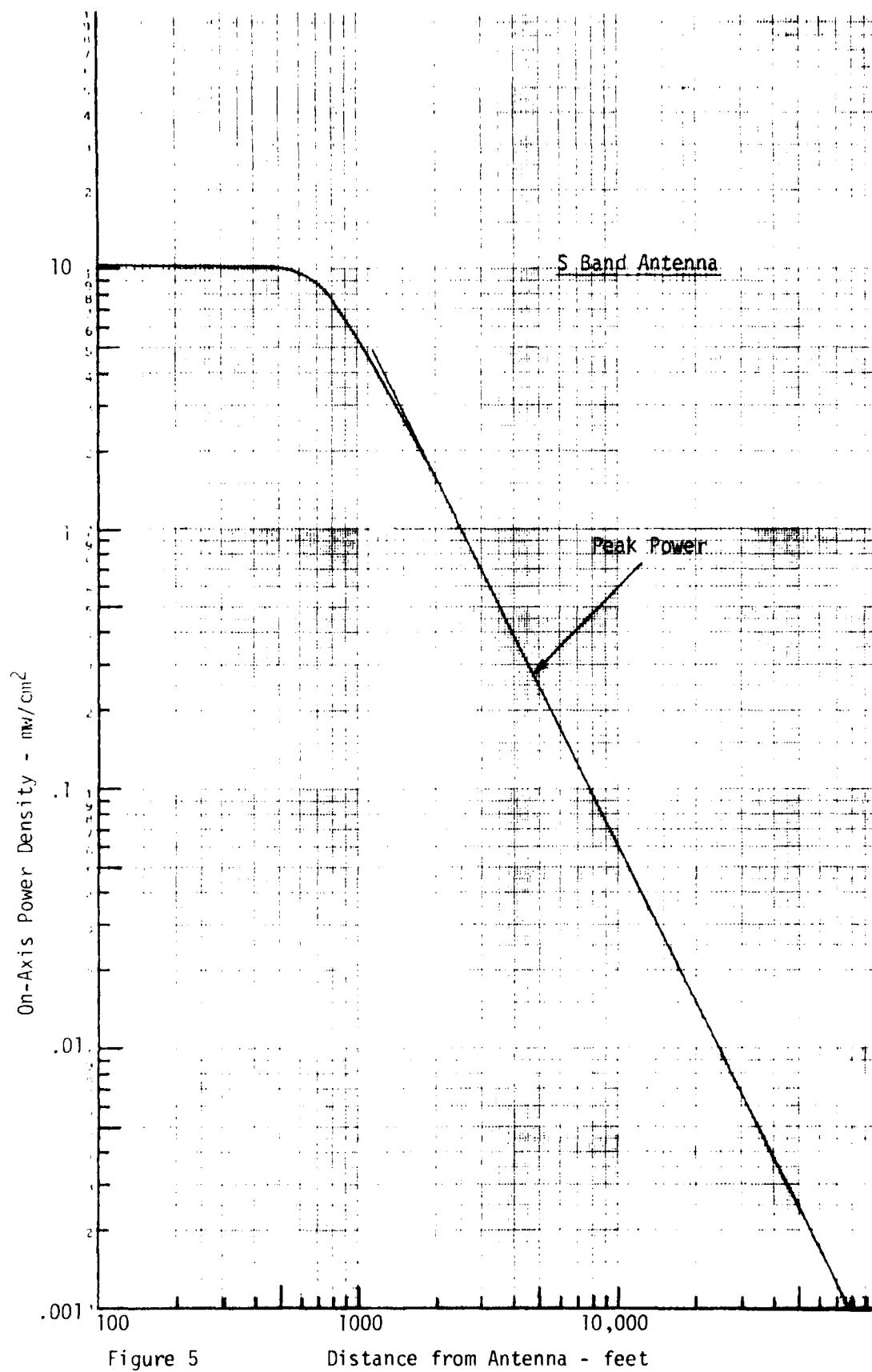
22. The Draft EIS is in error in including grading for sewage lagoons in the construction impacts listed in Section IV.A.5.2 of the Draft EIS.

Trenching for 2.5 miles of water line from the Manzano Area to the remote antenna field would be required only in the event an on-site storage tank is not installed at the antenna field for supplying potable water.

23. The criteria shown in Table 28 in the Draft EIS are the maximum permissible power densities for each antenna type and for each category of electroexplosive device (EED). The criteria have been calculated in accordance with AFR 127-100/Change 1 dated 31 March 1978 and 18 June 1979, respectively. Category 7 is for "Aircraft in flight with externally loaded weapons". This category recognizes that no shielding is provided by the aircraft. Further, AFR 127-100 does not indicate any rationale for applying the "exposed EED" criteria (Category 3) to EEDs on or in aircraft. Category 3 is applied to "critical areas involving explosives assembly, disassembly, testing, loading, and unloading operations. The distances (power densities) are based on a worst-case situation; that is, most sensitive EEDs presently in inventory, unshielded, having leads or circuitry which could inadvertently be formed into a resonant dipole, loop, or other type antenna." The criteria applied are considered sufficiently stringent to provide more than adequate margins of safety for most aircraft configurations.

The CSOC antennas transmit a continuous wave (CW) which is modulated for data transmission. As such, they are distinguished from radar type transmitters. In the case of CW transmission, average power is used in calculating the electromagnetic radiation power density levels. For radar transmitters, peak power is used based on pulse repetition rates, pulse widths, duty cycles, etc.. Thermal stacking factors are considered for radar transmitters, but are not applicable to CW transmissions.

The corrected Figure 5 in Appendix A of the Draft EIS -- S-Band Antenna Power Density versus Distance -- is included on the following page. In addition, all references to the X-Band Antenna in Appendix A should be deleted. These references appear on pages A-1, A-2, and Figure 6 (which is incorrectly labeled S-Band Antenna) on page A-9 of the Draft EIS.



Department of the Air Force, Peterson Air Force Base, Colorado

24. The comments with respect to traffic impact are substantially correct. It should be noted, however, that Highway 94 and Enoch Road (at the Peterson AFB/Colorado Springs location) are public highways. That portion of Pennsylvania Avenue (at the Kirtland AFB/Albuquerque location) impacted by CSOC traffic, is under the jurisdiction of the base. As such, the base has maintenance responsibility for the road and additionally can exercise traffic control measures to a greater degree than can be done on the public roads impacted by CSOC traffic in the vicinity of Colorado Springs. The point is that traffic impacts at Colorado Springs are primarily on a relatively low-volume rural public highway and those at the Albuquerque location are basically confined to the base entry gates and base roads.

25. The latest emissions inventory data available for the Colorado Springs AQMA/El Paso County area is limited to 1974 emissions for total suspended particulates and carbon monoxide, and 1977 emissions for hydrocarbons. Colorado Springs is presently updating emissions inventories; the conclusions of the Draft EIS with respect to air quality impacts are not expected to be changed to any significant degree with the new emissions data.

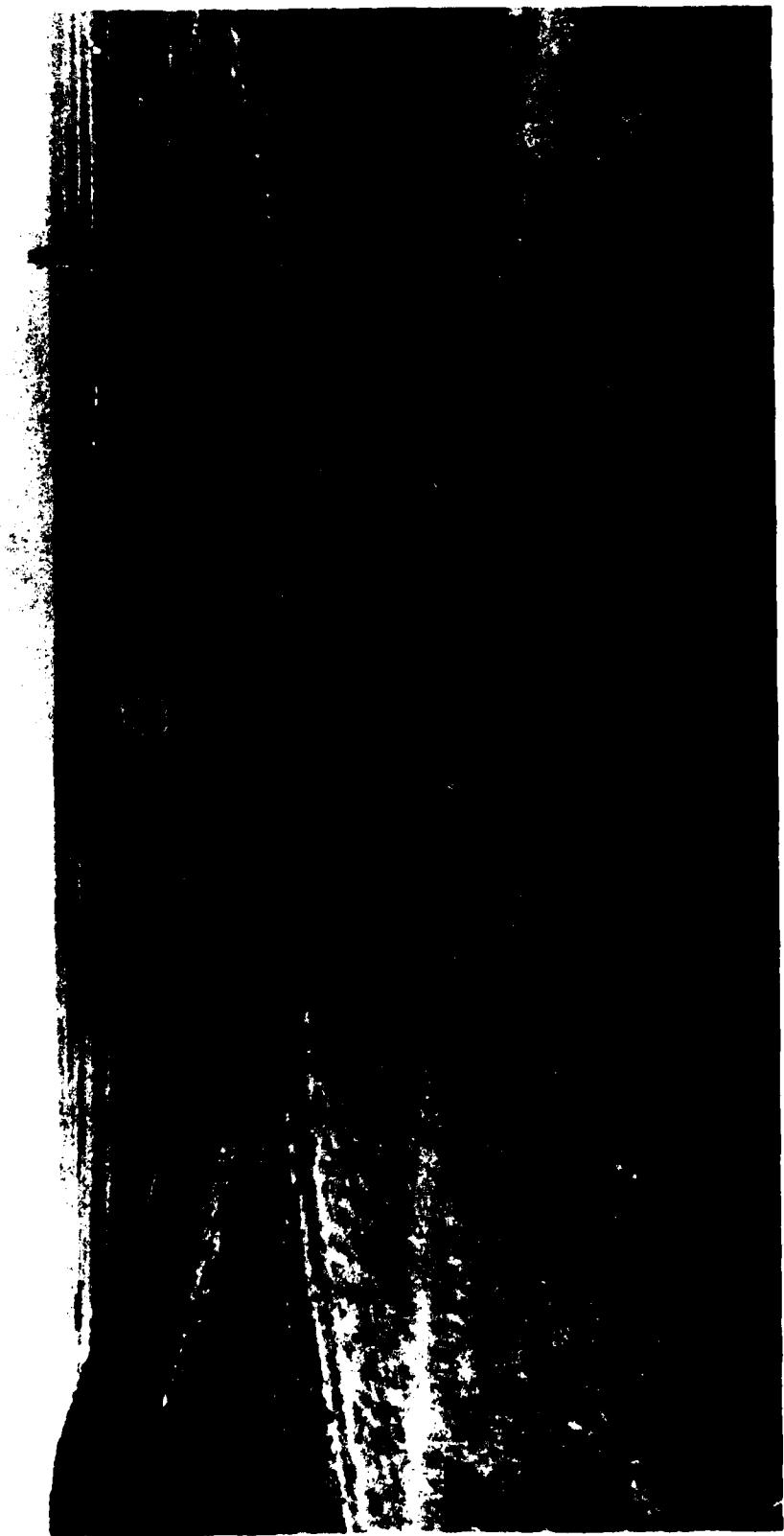
26. The Draft EIS recognizes the revised federal ozone standard and acknowledges that neither Colorado Springs nor El Paso County are in violation of the new standard. (Refer to page III-8, first paragraph, of the Draft EIS.)

27. The Draft EIS acknowledges that Albuquerque's air quality is aggravated by natural conditions such as the low-lying valley bordering the river which tends to trap and concentrate pollutants. (Refer to page III-33, first paragraph, of the Draft EIS.)

28. Climate data for Colorado Springs is listed in Table 9, not on page III-40 as stated in this comment. The latest meteorological data available are 1978 statistics obtained at the Colorado Springs Municipal Airport, Station No. 93037 (adjoining Peterson AFB). According to this data, there were 133 clear days, representing 36% of the total days in a year. Combined with 108 partly cloudy days, 66% of the year was either clear or partly cloudy.

Based on past experiences in the regional area, it is a correct presumption that "Several times per year local roads may be unpassable due to snow. This is particularly the case for county roads more so than for major highways and arterial roads."

29. According to the latest information available, the "Future Ti-jeras Arroyo Corridor" will not be located on the base because of potential interference with DOD activities. This places the nearest alignment over 5 miles from the CSOC site. Photographs of the Kirtland CSOC site were not included because of the classified facilities in the vicinity. Additionally, however, photographs of the Manzano building complex would not serve any useful purpose as far as demonstrating the CSOC visual or aesthetic impacts. The remote antenna field located south of the Manzano Area is shown in the accompanying photograph. This photo depicts the undulating topography of the site and shows the landscape to the west of the site. Although the antenna radomes could possibly be seen from public highways located west, south, southwest and northwest of the antenna field, the distance from these highways is in excess of 5 miles. At this distance the radomes would blend in with other structures on the base. (Read Comment No. 75, page III-57.)



Photograph of CSOC Antenna Field Site looking generally west across site.

30. The growth patterns described in the Draft EIS reflect adopted policies and plans of the governmental jurisdictions that control land use in the Colorado Springs/El Paso County area. Recent development pressures in the area east of Colorado Springs may bring about an alteration of these policies in the future.

31. These particular comments on Electromagnetic Radiation are simply a restatement of information contained in the Draft EIS. No response is necessary.

32. The existing buildings at the Albuquerque site are located NNW of the antenna field and are generally shielded by the Manzano Mountains. In addition, these buildings are at an elevation of 5600 feet MSL, or approximately 120 feet below the elevation of the antenna field. These factors result in no measurable power density at building roof-top locations. (Refer to Section IV.A.7.4 of the Draft EIS.)

33. It is true that active runways exist at the Albuquerque and Great Falls proposed CSOC locations, and that the Colorado Springs location is 10 miles east of Peterson AFB runways. The horizontal distance from the nearest antenna to the eastern end of the runway at Kirtland AFB is over 30,000 feet (5.8 miles), while at Malmstrom AFB, the nearest antenna is 2600 feet from the NE-SW runway.

34. The historical sites identified at the Alternate 1 location at Kirtland can be avoided through proper siting of the CSOC antenna field and the access roads. To protect Site No. 4 even further, it could be enclosed by fencing so that accidental disturbance of the site would not occur during the construction phase. The possibility that historical and anthropological groups will demand that no work begin is admittedly a possibility at either of the locations, but is considered less likely at Albuquerque since the base has been extensively surveyed by private archaeological firms under contract with the base. As a result of this prior work, the base has established a good working relationship with members of the archaeological community.

The CSOC antenna field is located approximately 2.5 miles north of the Isleta Indian Reservation.

35. The Draft EIS identifies projected 1985 capacity for each of the three candidate CSOC locations; this information is summarized in Table 43 of the Draft EIS. The projected capacities at each location are based on the number of students that could be accommodated at each location without re-opening classrooms that have been closed due to declining student enrollments. It should be noted, however, that in certain neighborhoods in both the Colorado Springs and Albuquerque metropolitan areas the local public schools are over-crowded as a result of rapid development that outpaced construction of new schools. If CSOC students were to locate in these particular neighborhoods they would add to the over-crowded school conditions.

In the Great Falls area there is a greater probability that some classrooms and possibly even an entire school, would have to be re-opened to accommodate a potential 2,160 CSOC students. This is particularly likely in view of the recent closure of the Anaconda Copper Mine and reduced base personnel at Malmstrom AFB that undoubtedly have caused a rapid decrease in school enrollment and subsequent closure of classrooms.

36. This information is so noted.

37. The cost of living index is expected to increase as the income level of the area increases. Income level is related to the type of industry; at Colorado Springs much of the new industry will bring in a labor force in the mid-to-upper income brackets. For this reason the cost of living index is expected to increase at a faster rate in Colorado Springs than in Albuquerque.

38. The cost of living index for housing is 101.6 in Colorado Springs and 110.0 in Albuquerque, a difference of 8.4 points. The word "affordable" on page IV-52, last paragraph, of the Draft EIS, should be replaced with the word "allocated".

39. There have been various terms applied to the satellite and shuttle control portions of the Consolidated Space Operations Center during the evolution of the program concept. In order to provide some consistency in CSOC determination the Satellite Operations Complex (SOC) and Shuttle Operations and Planning Complex (SOPC) have been established as the terminology for CSOC elements.

40. This information is so noted.

41. This information is so noted.

42. The conclusion on page iii of the Draft EIS states that CSOC would not cause a significant adverse environmental impact if located at either of the candidate locations, but that there are somewhat differing minor environmental impacts at each location. These are noted on the bottom of page i and the top of page ii of the Draft EIS.

43. The referenced letter has not been included in the Draft EIS; however, an official Resolution of the Board of County Commissioners of El Paso County and the City Council of the City of Colorado Springs is included on page III-97 of this document.

44. A description of the traffic resulting from the coal mining operation is properly included in the Draft EIS to describe traffic conditions that will exist on Highway 94 at the time the CSOC facility would be impacting the area. There is no reference made in the Draft EIS concerning "the need for coal trucks to cover their loads".

Department of Energy, Albuquerque Operations, Sandia Area Office, New Mexico

45. Traffic impact on Coyote Springs Road will be minimal since the main CSOC facility is located at the Manzano Area and only the remote antenna field is accessed by way of Coyote Springs Road. There will be a minimal amount of CSOC traffic using Coyote Springs Road after construction is completed. During the construction phase, heavy equipment, delivery vehicles, and construction personnel traffic will impact Coyote Springs Road. Most of this traffic would occur during early morning and late afternoon when construction workers are starting and finishing their work shift. This would be a relatively short-term impact and in light of the standard practice at Kirtland to start work crews earlier with earlier quitting times than the base employees, this impact should be minor. In the event Coyote Springs Road is temporarily obstructed as a result of construction activities, Mortar Range Road provides an alternate route by which SNLA employees can reach their destination.

Section IV.A.7.4.1 of the Draft EIS discusses ground level power densities; Table 36 shows these levels to be significantly below those considered hazardous to personnel at all locations, including Coyote Springs Road.

Section IV.A.7.1 discusses the  $10 \text{ mw/cm}^2$  criteria applicable to persons wearing pacemakers. The highest power density of  $.045 \text{ mw/cm}^2$  at Manzano Peak is less than one-one hundredth of the critical value.

46. This information is so noted.

47. Refer to response to Comment No. 105 (page III-130) for additional information with regard to "Federal Facility Ridesharing Program".

48. Refer to response to Comment No. 23 for observations on "thermal stacking" factors.

49. This information is so noted.

50. Figure 6 of the Draft EIS has been corrected to denote the "Withdrawal Area" east of the Manzano Area. The revised Figure 6 is shown on the following page.

United States Environmental Protection Agency, Region VIII

51. Section 176(c) of the Clean Air Act requires that a finding be made that the CSOC project is in conformity with the State Implementation Plan (SIP). Conformity of the CSOC will be discussed in the following paragraphs on the basis of the facility itself and the secondary effect caused by the increase in population.

The CSOC facility is located outside of the Colorado Springs nonattainment area and additionally the facility is exempt from applicable new source performance standards (Environmental Protection Agency Rules and Regulations) since the diesel generators are for emergency operation only. The facility therefore does not require a Prevention of Significant Deterioration permit and no other

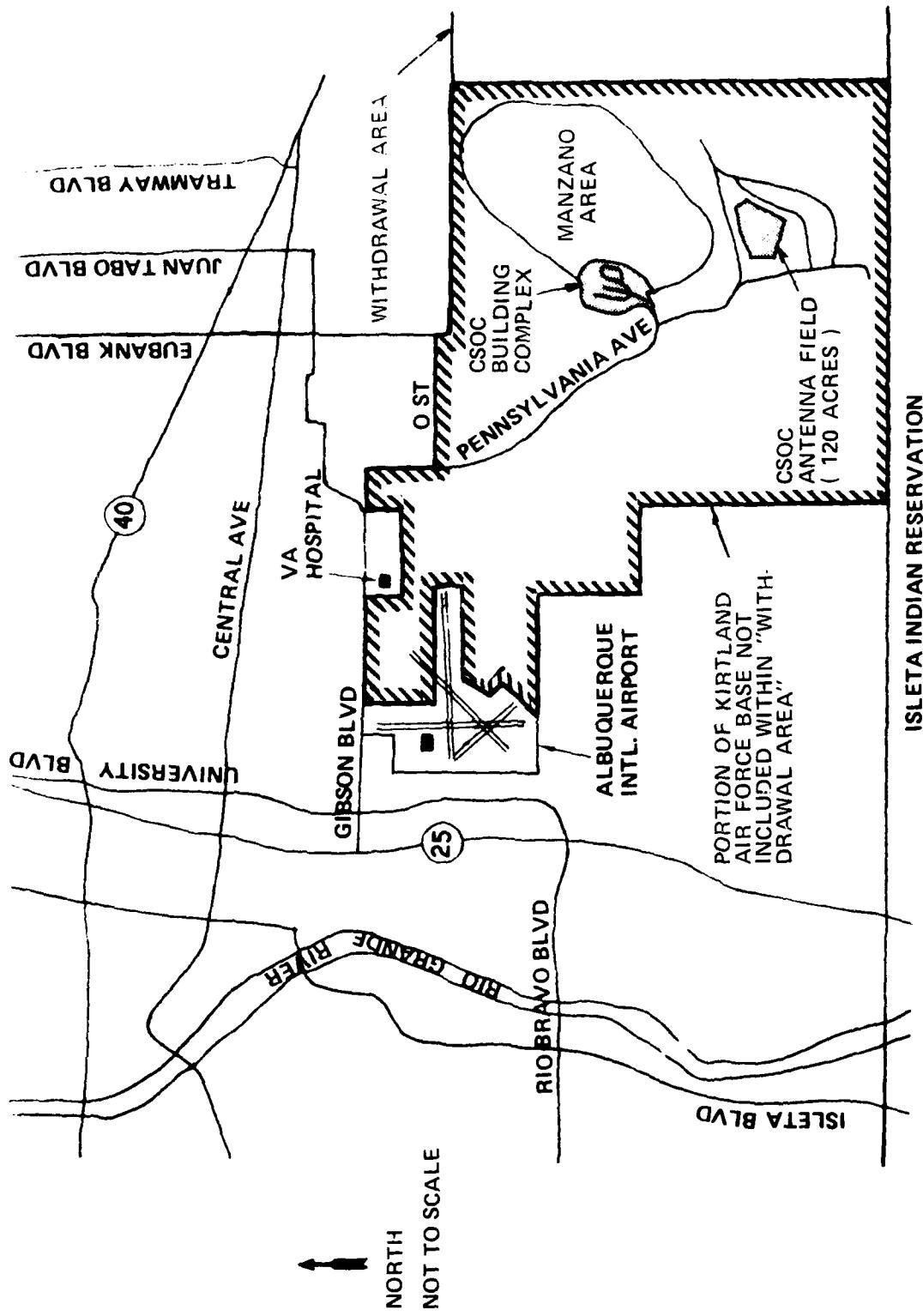


Figure 6 Location of Alternate 1 Sites at Kirtland Air Force Base

III - 36

51. Continued . . .

federal emission standards are applicable. A permit will be required, however, from the State of Colorado for operating the generators. The State Implementation Plan establishes maximum emission rates per generator; the calculated emissions of the CSOC generators indicates they will not exceed these maximum rates and will therefore be in conformance with the State Implementation Plan.

Total suspended particulates generated at the CSOC facility would originate from two activities: grading operations during the construction phase, and dust from CSOC vehicles traveling on unstabilized roads at the CSOC facility. The control measures included in the Colorado Springs/El Paso County Air Quality Maintenance Plan (part of the State Implementation Plan) address the reduction of total suspended particulates through paving of unpaved roads and alleys, and control of grading operations. In compliance with these control measures, the CSOC project would include the following mitigation measures:

- Stabilization of all roads (by paving or applying a dust palliative) at the facility and that portion of Enoch Road that provides access to the CSOC
- Compliance with El Paso County dust control and grading ordinance (including control of fugitive dust during construction/grading activities)

The primary area of concern with respect to air quality is the secondary impact generated by a potential of 6100 additional residents that would reside in the Colorado Springs urban area. Vehicular miles traveled by the CSOC employees and their families would be distributed throughout the region and would not have a direct impact at the CSOC location. The approximate .2% increase in motor vehicle emissions (caused by a corresponding increase in vehicular miles traveled in the area) would therefore be spread over the entire nonattainment area and not concentrated in one location. Furthermore, locally adopted control measures are designed to accommodate an annual rate of increase of 4.7% in area-wide vehicle miles of travel. The potential population increase generated by the CSOC project is within the Pikes Peak Region population projections used for air quality planning and contained in the State Implementation Plan. (These population projections are consistent with 208 projections for areawide water quality planning, the 1990 Transportation Plan, et al. These figures were based on the document prepared in October of 1977 entitled "Small Area Projections Population, Employment, Housing Units and Land Use for the Pikes Peak Region, 1973-2000".) The increase in motor vehicle emissions in the urbanized area of Colorado Springs as a result of the additional vehicular miles traveled in the area by the CSOC population would be mitigated through the mandated Federal Facility Ridesharing Program which is designed to promote car and van pooling to reduce vehicular miles traveled. A goal of 35% ridership has been established by the Air Force and would be applicable to the CSOC.

Based on the above information, and the mitigation measures that would be included as part of the CSOC project, a finding of conformance of the CSOC with the State Implementation Plan can be made.

Department of Transportation, Federal Aviation Administration, Texas

52. This information is so noted.

53. The Air Force understands that federal rulemaking procedure would be required to establish restricted airspace that would insure avoidance of the antennae by all air traffic. If Kirtland AFB were chosen as the CSOC site, application would be made to the Federal Aviation Administration for the necessary restriction.

Department of Transportation, Federal Aviation Administration, Colorado

54. The suggested prohibited area of one mile in diameter and from the surface to 2500 feet above ground level is excessively restrictive. The safety criteria for the various categories of EEDs were evaluated against the worst case antenna radiated ground power densities at the proposed CSOC site east of Colorado Springs. No single antenna or combination of antennae is capable of producing ground level power densities that exceed the most stringent EED criteria. Therefore, the planned 1000-foot ground perimeter security buffer zone around the CSOC facility will more than adequately provide the necessary safety zone.

From the standpoint of airborne EEDs, the environmental analysis indicates that the CSOC S-band antenna is within Occupational Safety and Health Agency (OSHA) standards at a radial distance of approximately 500 feet. Although the CSOC facility is not within a normally-traveled air corridor where aircraft would be below 500 feet altitude, precautionary measures should be taken to avoid the EED hazard which could exist within a 500-foot radius hemispherical volume of the S-band antenna. It is therefore recommended that aircraft be separated 1000 feet vertically from the facility. This should not pose a problem with the existing Federal Airway V-83 since the minimum enroute altitude (MEA) for V-83 provides the necessary vertical separation from the antenna site.

55. The DOD Electromagnetic Compatibility Analysis Center conducted a survey of the three candidate CSOC sites. The survey results, documented in "EMC Analysis of the AFSCF CSOC Proposed Sites" (ECAC-CR-80-081), indicated that there were no significant interference problems which would preclude selection of Kirtland AFB, Malmstrom AFB or Colorado Springs. There were some instances, however, in which the potential for interference exists. In keeping with established practice, potential problem areas at the selected site will be individually analyzed to determine what mitigation measures, if any, must be taken.

Department of the Interior, Office of the Secretary, Colorado

56. See response to Comment No. 61, page III-82. The Area Manager of the regional U.S. Fish and Wildlife Service will be contacted prior to any construction activity at the selected CSOC location. However, as noted in the response to Comment No. 61, there are no threatened or endangered species that are likely to be affected by the CSOC project.

57. See response to Comment No. 56.

58. It is so noted that hunting in the mountains east of Albuquerque is restricted to archery, and that elk are not known to occur in these mountains.

59. See response to Comment No. 34.

60. At the Colorado Springs CSOC location, surface drainage will be directed towards the natural drainage channels bisecting the property. The fuel storage area will be diked to prevent escape of fuel into the surface drainage system and ultimately the underground water basin in the event of a spill or tank rupture.

Surface drainage at the antenna field site at Kirtland AFB will be directed into the existing drainage course at the site. There will be no fuel storage at the antenna field; fuel storage will occur at the Manzano Area where a dike will be constructed to prevent escape of spilled fuel. Surface drainage at the Manzano complex is via the paved street system draining into a natural arroyo.

Surface drainage at Malmstrom AFB in the vicinity of the SAGE complex is handled by the paved streets that drain to the storm drain system serving the main base area. Again, fuel storage will be protected with a dike. Surface drainage at the antenna field site (in either Option A or B) will be directed towards the natural drainage course in the vicinity.

Surface runoff at all three locations as a result of the CSOC facility will be limited to natural runoff of paved and roofed surfaces during rainfall.

S T A T E   A G E N C I E S

Comments and Responses

Comments: No. 61 through No. 89  
(Pages III-41 through III-81)

Responses: Pages III-82 through III-88

STATE OF COLORADO  
Richard D. Lamm, Governor  
DEPARTMENT OF NATURAL RESOURCES

## DIVISION OF WILDLIFE

Jack R. Grieb, Director  
6060 Broadway  
Denver, Colorado 80216 (825-1192)



DEC 8 1980

DIV. OF PLANNING

December 4, 1980

TO : Steve Ellis  
Colorado Clearinghouse  
*Bert Baker*  
FROM: Bert Baker  
Wildlife Program Specialist  
SUBJ: Consolidated Space Operations Center DEIS  
Minor Action #80-156

Wildlife Division Biologist Bob Davies of our Southeast Region office and I have reviewed the above document and offer comments and recommendations on it as follows:

1. From our position the most obvious discrepancy in this DEIS is that wildlife and habitats are completely ignored. This observation applies not only to the Preferred Peterson AFB/Colorado location but also to Alternate Locations Numbers 2 and 3, respectively, at Kirtland and Malmstrom AF Bases.

61

2. At Colorado Springs, about 360 acres of prairie habitats supporting pronghorns, jackrabbits, predatory birds, and miscellaneous other wildlife will be directly downgraded. Extents of degradation of habitats and species populations are, nevertheless, difficult to assess.

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3. Also at Colorado Springs, the projected traffic increases on Highway 24 will undoubtedly cause an increase in mortality of animals by vehicle collisions.

4. We recommend placement of power and communications lines underground wherever feasible. If aboveground towers are used, we recommend that perches be placed on them to minimize electrocution of predatory birds.

63

/d  
cc: E. Prenzlow  
B. Davies  
File: Fed. Ag./Air Force

III-41

# STATE OF COLORADO

**OFFICE OF ENERGY CONSERVATION**  
Office of the Governor  
1525 Sherman Street  
Denver, Colorado 80203  
Phone (303) 839-2507



Richard D. Lamm  
Governor  
Joseph H. Zettel  
Acting Executive Director

DATE: December 3, 1980

TO: Colorado Clearinghouse

DEC 4. 1980

ENV. OF PLANNING

FROM: David Ford

SUBJECT: Consolidated Space Operations Center DEIS  
Department of the Air Force #80-156

The Office of Energy Conservation has reviewed the Draft Environmental Impact Statement for the Consolidated Space Operations Center and has the following comments to offer.

This office is pleased with the DEIS responses to the issues raised during the Scoping Process for the CSOC in Colorado Springs. While it appears the demand for conventional non-renewable energy resources can be met by local suppliers, OEC supports the Air Force Energy Study in which alternative heating methods are being evaluated. Establishing a Ridesharing Program will have a positive effect in reducing fuel consumption, air pollution, and easing the strain on local traffic congestion.

DF:TB:pl

STATE OF COLORADO



RICHARD D. LAMM  
GOVERNOR

JOHN W. ROLD  
Director

COLORADO GEOLOGICAL SURVEY  
DEPARTMENT OF NATURAL RESOURCES

715 STATE CENTENNIAL BUILDING - 1313 SHERMAN STREET  
DENVER, COLORADO 80203 PHONE (303) 839-2611

November 25, 1980

NOV 25 1980

Mr. S. O. Ellis  
Colorado Division of Planning  
1313 Sherman Street  
Denver, CO 80203

DIV. OF PLANNING

Dear Mr. Ellis:

RE: USAF CONSOLIDATED SPACE  
OPERATIONS CENTER EIS

We have received and reviewed this EIS. Until a final specific site (in Colorado Springs, if selected) is determined for this facility, our review is premature. We request that we be able to review this project if and after a Colorado Springs site is selected.

Sincerely,

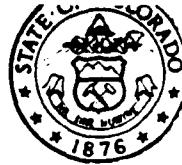
*James M. Soule*  
James M. Soule  
Engineering Geologist

JMS/gp

III-43

GEOLOGY  
STORY OF THE PAST . . . KEY TO THE FUTURE

RICHARD D. LAMM  
Governor



J A DANIELSON  
State Engineer

## DIVISION OF WATER RESOURCES

Department of Natural Resources  
1313 Sherman Street - Room 818  
Denver, Colorado 80203  
Administration (303) 839-3581  
Ground Water (303) 839-3587

November 19, 1980

NUV 2 1980

MEMORANDUM

DIV. OF PLANNING

TO: Stephen O. Ellis, State Clearinghouse  
FROM: Hal D. Simpson, Assistant State Engineer  
SUBJECT: Consolidated Space Operations Center, Draft Environmental  
Impact Statement

We appreciate the opportunity to review and comment on the Environmental Impact Statement for the Consolidated Space Operations Center with respect to its impact on the water resources of the area. We would not have any objections to this project providing that the development of the center does not conflict with state water statutes.

Hal D. Simpson  
Hal D. Simpson, P.E.

HDS/JMS:mvf

cc: Bob Jesse, Div. Eng.

# DEPARTMENT OF HIGHWAYS



THOMAS L. JUDGE, GOVERNOR

2701 PROSPECT

STATE OF MONTANA

HELENA MONTANA 59601

December 11, 1980

Deputy For Environment and Safety  
Office of the Secretary of the Air Force (SAF/MIO)  
Washington, D.C. 20330

Gentlemen:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for the proposed Consolidated Space Operations Center.

We have reviewed the draft EIS and offer the following comments.

1. Comments on Existing Traffic Environment page III - 50.

Existing 1980 traffic data east of 57th Street and west of the proposed access under option B on U.S. Highway 87/89, had an average daily traffic count of 4,090 vehicles. With the maximum employment from the CSOC facility expected to peak with 1,963 people, this would mean an additional 3,533 trips per day would be added to U.S. Highway 87/89. This would be an 86% increase in the existing 1980 ADT. With the proper access design, possible signalization and the scheduled upgrading of U.S. 87/89 to a four lane facility in 1983, potential adverse traffic impacts could be greatly reduced.

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- A. The Great Falls Policy Coordinating Committee just recently agreed to pursue the South Bypass arterial and have deposited \$500,000.00 from the Transportation Improvement Fund for advanced Right of Way acquisition. As stated in the EIS, when this proposal is completed, more efficient travel to and from the southwestern portion of the city can be achieved.
- B. The existing ADT numbers shown in Figure 14, page III - 51 exceed our year 2000 traffic projections. Attached are Montana Department of Highways figures for 1980 and the year 2000. These figures will alter subsequent discussion on traffic impacts.

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66

Deputy for Environment and Safety  
December 11, 1980  
Page 2

2. Comments on the Air Quality Section of the EIS.

The EIS apparently makes use of the AP 42 supplement 5 Mobile Source Emission factors which have been superceded by the Mobile 1 or 2 models. The supplement 5 factors are generally lower than those currently in use. As stated in the EIS Great Falls has been designated as non attainment for both total suspended particulates (TSP) and carbon monoxide (CO) by the Environmental Protection Agency. Great Falls will have to reach compliance with the National Ambient Air Quality Standards (NAAQS) by 1982, before construction of the CSOC begins. 67

In summary, the long range transportation plans for Great Falls could adequately accomodate either Option A or Option B of the CSOC proposal.

Sincerely,



James W. Hahn, Chief  
Planning & Research Bureau

JWH:DWC:dk:8L

cc: Homer Wheeler  
Bill Cloud  
Bret Brunner

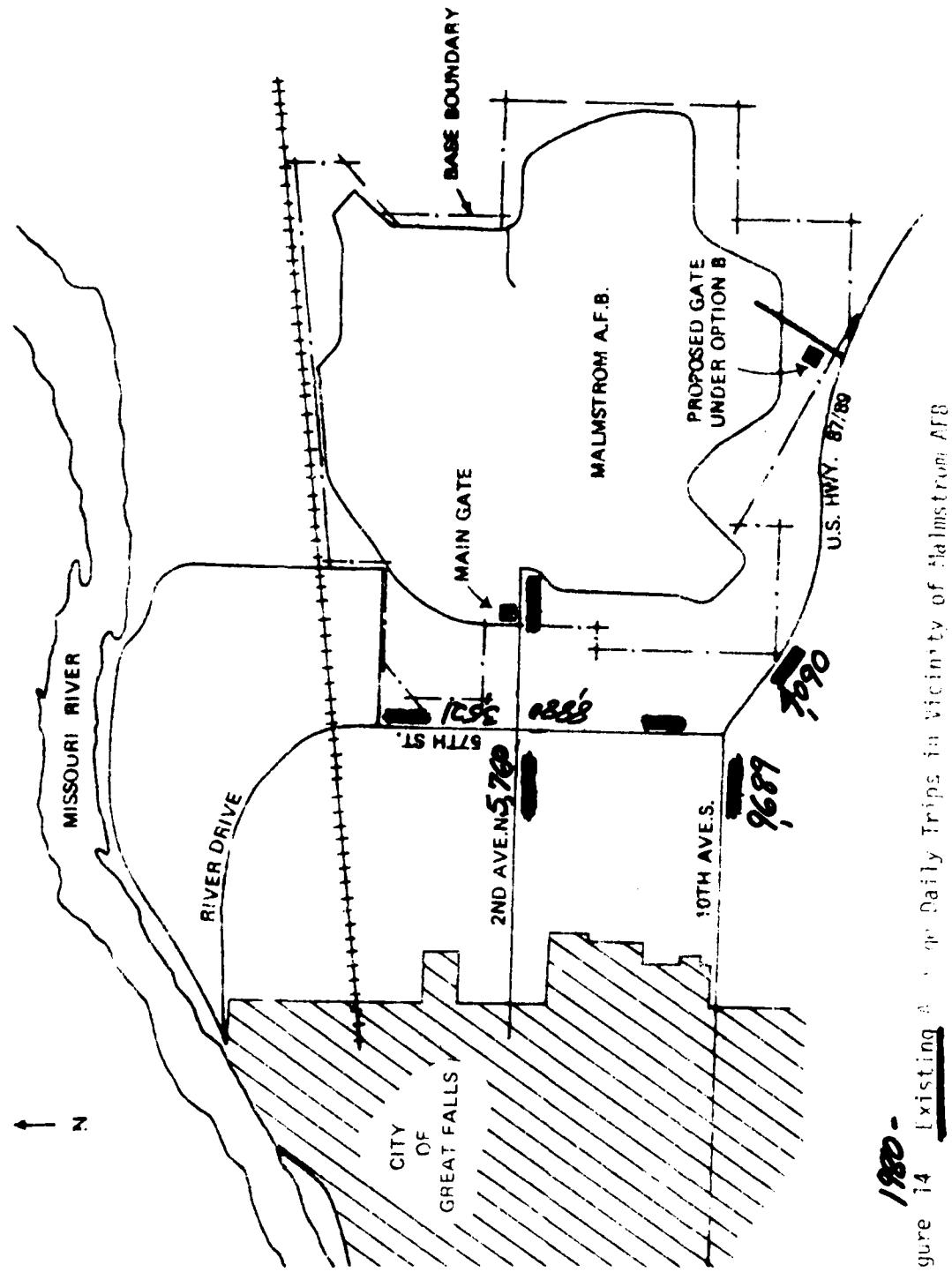


Figure 14. Existing and Daily Trips in Vicinity of Halmstrom AFB

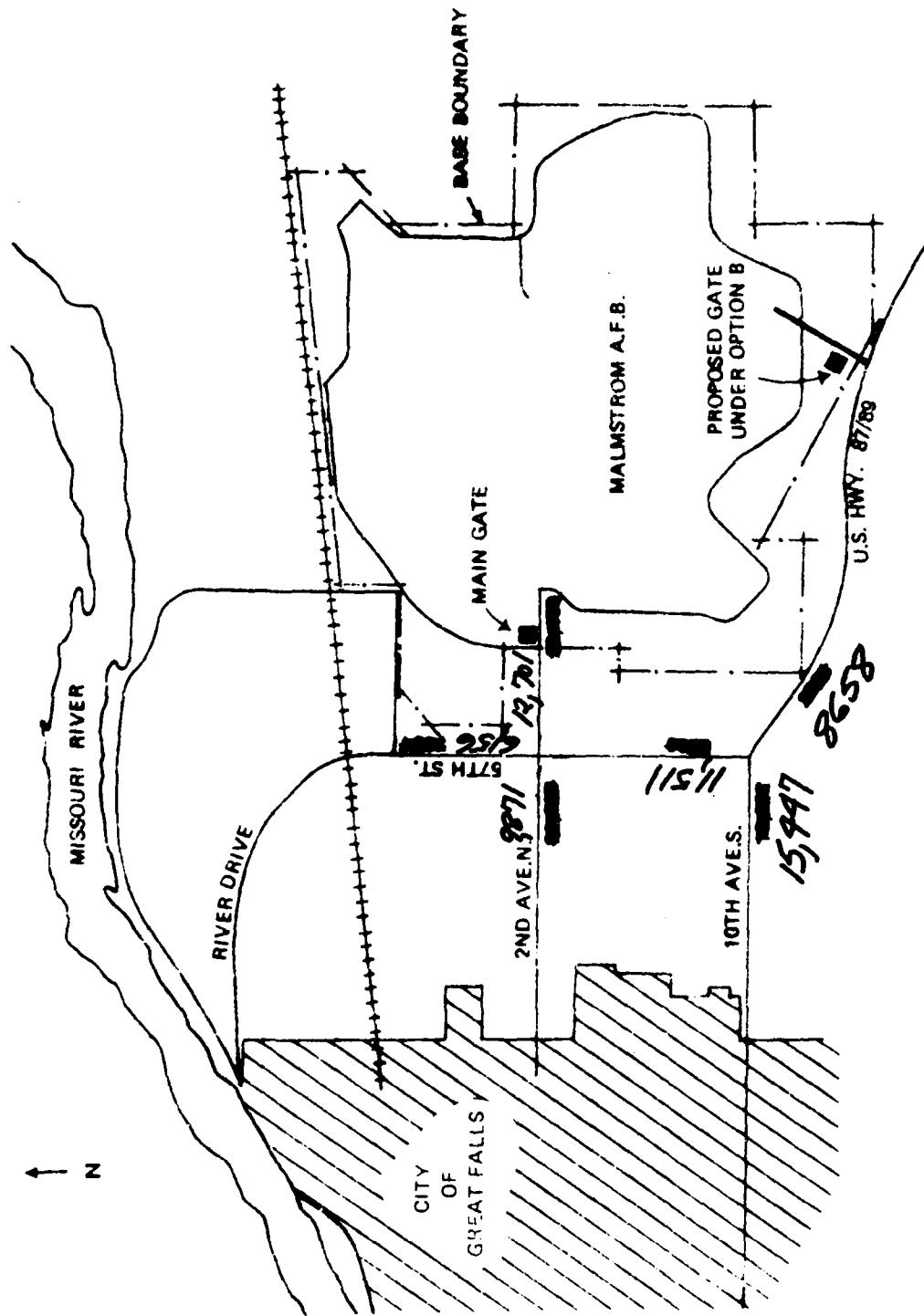


Figure 14 **YEAR 2,000 Projected AOT**

A SUBSTANTIVE RESPONSE  
TO THE  
DRAFT ENVIRONMENTAL IMPACT STATEMENT  
FOR THE  
CONOLIDATED SANDY OPERATIONS CENTER

Submitted By: The State of New Mexico



STATE OF NEW MEXICO  
OFFICE OF THE GOVERNOR  
SANTA FE  
87503

BRUCE KING  
GOVERNOR

December 11, 1980

The Honorable Hans Mark  
Secretary of Air Force  
Office of the Secretary of Air Force  
Pentagon  
Washington, D.C. 20330

Dear Secretary Mark:

ATTENTION: Carlos Stern, Ph.D.  
Deputy for Environment and Safety

This letter serves to transmit the State of New Mexico's response to the Draft Environmental Impact Statement (DEIS) for the Colorado Springs siting of the Consolidated Space Operation Center (CSOC).

At the outset, I wish to point out that the New Mexico Congressional Delegation and I feel very strongly that the CSOC project is vital to our national defense and fully deserving of our support. We feel equally strongly that nothing should be done or tolerated that will unnecessarily impede its progress; rather, all necessary steps should be taken to facilitate that progress.

In the best interests of those objectives, we appreciate the opportunity to respond to the DEIS Draft EIS of October 1980. In its analysis of alternative sites, we are convinced that some important aspects were not considered, some disproportionately treated, and some mistakenly assessed.

Attached is the State of New Mexico's substantive response. We submit it in the spirit of assisting the NM decision makers in arriving at the most accurate conclusions and in making the most valid judgments in the most expeditious manner possible.

I also respectfully request the early opportunity for a forum that will permit New Mexico to address the operational considerations affecting the selection of the NM site. When all of the issues, both operational and environmental, have been fully and objectively explored, I am convinced that New Mexico's position as the preeminent CSOC site will emerge clearly.

Very truly yours,

*Bruce King*

Bruce King  
GOVERNOR

ME:jb

### Introduction

This document is submitted in response to the Draft Environmental Impact Statement (EIS) on the Colorado Springs location for the Consolidated Space Operations Center (CSOC). It directly addresses key issues which either have not been considered in the Draft EIS or which we deem to have been inadequately treated and/or mistakenly assessed.

The sequence of issues presented here follows the sequence contained in the Draft EIS, and every effort has been exerted to make all comparisons and contrasts as direct and relevant as possible. Where social and economic factors are addressed in the Draft EIS or where they are not addressed but suggest themselves strongly for consideration, they are responded to or raised herein. However, no attempt is made at a cost/benefit comparative analysis between the Colorado Springs location and the Albuquerque location in either the social or economic realms.

Similarly, all operational considerations, vital as they may be to the decisions on location and site selections for the CSOC, are alluded to or addressed herein only when and to the extent that the Draft EIS raises such considerations. Again, no attempt is made at a cost/benefit comparative analysis between the two locations with respect to operational considerations.

The following matrix chart aims at providing an overview of the net values that might be associated with the set of environmental, social, and economic concerns related to the issues set forth in the Draft EIS. It makes no effort to quantify these concerns; rather, it attempts to provide some relative values related to the specific comments contained in the body of this document and to direct attention to those issues and considerations deserving of further exploration.

## CSOC MATRIX CHART

+ = FAVORABLE  
 - = ADVERSE  
 O = NO IMPACT

Security

While security is a crucial element in the CSOC consideration, it is mentioned only briefly in the Draft EIS. Neither the environmental nor the economic costs associated therewith is addressed.

At Kirtland Air Force Base, the entire CSOC installation would be surrounded by a closed site, government-owned and controlled, and completely surrounded by existing fences and/or patrol roads. To the north, the Manzano mountains, rising 6500 feet, are completely surrounded by quadrupie fencing (the NM buildings would be within that fencing; the antenna field would require its own additional fencing).

To the south is the Isleta Indian Pueblo; to the west is unoccupied mesa; and to the east are unoccupied rugged mountains rising to 1200 feet, controlled by the Department of Energy, with portions formally withdrawn from other uses. To the northwest lies Sandia National Laboratories, completely fenced and under 24-hour guard, within Kirtland's own fences and controlled areas.

Security forces at both Kirtland and Sandia could be called as back-up to whatever forces would be established at CSOC; response time would be in the order of 1 to 15 minutes. Some elements of the Albuquerque police force could respond within 30 to 40 minutes. The Military Airlift Command's helicopter force will be called upon in an emergency, much as they do in mountain rescue work now. The New Mexico National Guard armory is within 5 miles of the proposed location, and the New Mexico Air National Guard maintains its flight equipment at a Kirtland hangar.

68

It appears that no security system of any kind currently exists at the proposed site near Laramore Springs and that both primary and secondary security systems would have to be provided.

The same conditions appear to obtain with respect to fire protection: the proposed site near Laramore Springs entirely lacks such provision, whereas the Manzano Area contains a fully-equipped and operational fire station that is entirely inadequate to serve the CSOC.

### Land Use Policy Issues

The Environmental Impact Statement identified no land use policy problems associated with Kirtland as a location for CSOC. The base cooperates with both State and Middle Rio Grand planning agencies to prohibit pollutants and uses detrimental to jointly determined goals. No zoning is required; no private developments threaten; no controls and regulations are involved; distant extension of local services is not required, no farming and grazing interests are affected; no cooperation among State, County or local officials needs to be initiated because it has been in existence for some time.

The Colorado Springs' policy is to discourage annexation and provision of services outside the current Planning Area; it particularly discourages westward expansion because of adverse effects upon the municipal airport and air pollution. In addition to the City, both the El Paso County and the Pike's Peak Area Council of Governments concur in this policy. Because the area chosen for CSOC is also unincorporated county land, there are at present no zoning regulations to prevent unregulated development. 69

It is public information that because of the development concerns in and around Colorado Springs the Department of Housing and Urban Development is sponsoring, through the Pike's Peak Area Council of Governments, a detailed environmental analysis, which is currently in process. That analysis should correlate with the EIS Draft EIS. 70

### Land Acquisition Issues

There are absolutely no land acquisition costs associated with locating the TSOC at Kirtland Air Force Base. All land is government property, dedicated for several decades to various aspects of defense and energy programs involving research and development, field and laboratory testing, and management and administration. No rights-of-way, easements, or purchases are required for special facilities, new structures, transportation extensions, communication lines, buffer zones, or visual aesthetics.

The acquisition of land near Colorado Springs for the TSOC would remove public lands from agricultural production and would entail a public cost in acquisition and transfer. Future expansion of the site would be restricted, depending on the availability of contiguous property and the costs thereof, when such expansion may be deemed necessary or desirable. No such constraints exist with respect to the Manzano Area on Kirtland Air Force Base.

Questions related to rights-of-way, easements, and other rights, such as water rights, have not been addressed in the Draft EIS.

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Archaeological Issues

At Kirtland, four sites identified have marginal historical interest, dating only from the first two decades of the 20th century. Even if the State should determine that one of these sites nearest to the proposed facility is worth preserving for eventual exploration in depth, it can be protected by modest fencing or by layout design of the antenna field to prevent disturbance.

The Draft EIS notes: "An archaeological survey of the CSOC sites (in Colorado Springs) has not been performed to-date..."

74

### Visual Impact Issues

Kirtland Air Force base has not only 54,000 acres dedicated to its own uses and those of its tenants, but also enjoys a surround of vacant mesa, rugged mountains, ICBM-withdrawn areas, an Indian reservation, and the Kirtland complex of buildings and test sites which further isolate the area involved.

The 14.5 acres required for the CSOC facility and antenna field are minuscule by comparison. Located almost in the center of this vast acreage, they would present absolutely no visual impact: lost among the lower insulations of the mesa, dwarfed by the mountains, barely visible to even the aided eye from distant public access (if one could find a clear line-of-sight). There is certainly no need for landscaping to hide either buildings or the antenna field. 75

In the other hand, the proposed sites near Colorado Springs would be visible to the public for many miles in and around Highway 94 and Enoch Road. Further, these sites will be readily accessible to the general public, a condition that would not exist on Kirtland Air Force Base.

A serious related concern is that of vandalism. The Draft EIS indicates that the CSOC antenna field would be within 1,000 feet of the security fence, from which a high-powered rifle could easily do great damage to the facility. At Kirtland, no such opportunity presents itself. 76

### Seismic Issues

Although a portion of New Mexico is within seismic zone 2 (moderate hazard), and although Socorro (some 70 miles south of Albuquerque) is the earthquake "center" of the State, these facts did not deter construction of the Very Large Array of radio telescopes some forty miles due west of Socorro. At this facility, along three axes of Y shape (with an effective radius of 10 miles), twenty-seven huge telescopes are computer-oriented to target points in stellar space to within a fraction of a second of arc, and input data are timed for reduction from the nearest to the furthest telescope within billionths of a second.

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### Traffic Issues

Increased vehicular traffic from civilians employed at CSOC would cause but a slight increase in congestion at the Base because Mirtland has five entrances to accommodate employees arriving from all points of the compass. The Base now staggers traffic, with the Air Force contingent working from 7:20 am to 4:00 pm and Sandia Laboratories working from 8:00 am to 4:30 pm.

Contractors typically start their work crews earlier and schedule quitting times earlier. Trucks hauling wet mix or prestressed girders are scheduled to arrive at non-peak times. Contractor personnel have a special entrance on Eubank Avenue for obtaining clearances and Sandia guard escorts.

Since Base housing is available for the military staff who might be employed at CSOC, they would not much contribute to traffic pressures. There would be some short-lived, peak-time congestion along Pennsylvania Avenue inside the Base, where traffic from three directions would converge on its way to the Manzano site; but there is sufficient length of roadway to prevent back-up to Base entrances. There are off-road parking areas to accommodate vehicles that on occasion would have to give right-of-way to munitions convoys.

To reduce traffic impacts, Sandia uses its own buses to transport employees to remote sites in the direction of the proposed CSOC: they are returned to Sandia parking lots and offices in time to leave with others with whom they may be sharing rides. About 55 percent of Sandia staff are in ride-sharing programs.

At Colorado Springs, present peak-hour congestion at the Highway 24/Peterson Road intersection will be increased by CSOC traffic and may require the addition of a lane for either northbound or westbound traffic. Peak close-of-work traffic entering Highway 94 from the CSOC site access road (Ancon Road) will require a traffic control device to enable vehicles to enter the highway safely. Because all CSOC traffic would use this

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Traffic Issues (Continued)

entrance (810 vehicles at start and close of work and shift changes), congestion will be significant. A right-turn lane on Highway 94 at the site access road will be needed. Two miles of Enoch Road (the site access road) will require paving to prevent total suspended particulate increases and to prevent erosion and inconvenience in inclement weather.

While the environmental aspects of traffic have been adequately addressed in the Draft EIS, the same cannot be said for economic considerations. The CSOC sites proposed at Colorado Springs would require expensive road improvements to accommodate the associated traffic. It is conservatively estimated that the necessary improvements would cost \$700,000.

In addition, it is estimated that the longer average travel distances in Colorado Springs would result in additional vehicle operating costs exceeding \$1000 per day, in large measure for gasoline, for personal traveling to and from the CSOC sites.

80

### Air Quality Issues

The east-west traffic that would be generated to the proposed site east of Colorado Springs would create a new burden of pollutants in the amount of .2 percent, whereas the amount estimated at Albuquerque would be .14 percent. Albuquerque's air quality environment for carbon monoxide above 9ppm would not improve with increased traffic, but the tons of such emmissions from vehicles would be fewer than at Colorado Springs (523 tons versus 536). However, the impact of such emmissions in either location would be minimal.

### Meteorological Issues

The annual rainfall in Albuquerque averages 7.4 inches (half that of Colorado Springs), with snowfall at 9.2 inches (one-fourth that of Colorado Springs). Mean average temperature is 8 degrees higher. The recorded extreme minimum is 10 degrees higher. In Albuquerque, the mean minimum is below freezing for only three months (versus six for Colorado Springs). With such small amounts of humidity and fewer lower temperatures, it is not often that Albuquerque suffers from a damaging ice storm in winter or from an area-wide downpour in summer. Moderate fog may occur once or twice a year for a very short early morning period in Albuquerque versus 48 average occurrences at Colorado Springs. The climatic conditions strongly suggest that fewer man-hours of work are lost in the Albuquerque area than in Southern Colorado.

Because Albuquerque receives over 75 percent of the possible solar energy available, it is fast becoming a center for the commercial and residential adoption of passive and active solar systems for hot water and whole-building heating.

### Transportation Issues

One advantage of location in Albuquerque is the number of direct airline flights to various major cities that might require personal liaison, as the table below illustrates:

	<u>Albuquerque</u>	<u>Colorado Springs</u>
Los Angeles	9 Flights	0 Flights
Chicago	4 Flights	1 Flight
San Francisco	2 Flights	0 Flights
Dallas	16 Flights	0 Flights
Atlanta	3 Flights	0 Flights
Denver	12 Flights	16 Flights
St Louis	1 Flight	0 Flights
Kansas City	1 Flight	0 Flights
Las Vegas	2 Flights	0 Flights
El Paso	6 Flights	0 Flights
Phoenix	5 Flights	0 Flights

The major air carriers in Albuquerque are American, TWA, Eastern, Frontier, Continental, Texas International and Southwest. The major carriers serving Colorado Springs are TWA, Frontier, Continental, and Braniff.

For Washington and Houston, these flights with stops are available:

Houston:	<u>Albuquerque</u>	<u>Colorado Springs</u>
One Stop	8 Flights	1 Flight
Two Stops	2 Flights	0 Flights
One Connection	13 Flights	9 Flights (18 flights including commuter airlines)
Washington:		
One Stop	4 Flights	0 Flights
One Connection	20 Flights	7 Flights (15 flights including commuter airlines)

### Utility Issues (Continued)

Electricity: The Draft EIS addresses the availability of adequate electric power at both Colorado Springs and Albuquerque. At first glance, both locations appear to have the capacity to serve a CSOC installation, and, if short-term availability of electric power were the only consideration, either site would do. However, electrical capacity, reserve margins, capital expenditures, and future customer costs for electric power should also be considered.

Mountain View Electric Cooperative (MV) is a distribution co-op whose power is supplied by Tristate Generation and Transmission (TGT). TGT's major source of power is WAPA (Hydroelectric)--see Exhibit I. The inexpensive hydro power transmitted by WAPA to TGT is limited to 550 megawatts in the summer peak and 400 megawatts in the winter peak. These are the maximum limits available from WAPA to TGT. Additional power demands placed on MV and, in turn, on TGT will have to be met by more expensive oil, gas, and/or coal generation or by purchased power. In the long run, this could well translate into higher rates for all MV customers.

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On the other hand, Public Service Company of New Mexico (PNM), which serves Albuquerque and Kirtland AFB, generates electric power from its own coal-fired power plants, transmits the power to its customers throughout the state of New Mexico. This summer PNM reached a system electrical peak of 710 megawatts while maintaining generating capacity of 1,266 megawatts.

The location of the CSOC in Colorado Springs might create difficulties for MV, as it would require approximately a 30 percent increase in demand and a parallel increase of 67 percent in kilowatt hours. A demand such as CSOC would create no difficulties for PNM. The CSOC power requirements would represent only 1 percent of the total demand on the PNM system.

TGT has been reluctant so far to fire up its more expensive oil plants except when purchase power has been unavailable. The reticence places an additional burden on the entire region's supply and raises TGT's cost of power.

On the other hand, coal fuels 85 percent of PNM's power generators for its customers in New Mexico. PNM is also participating as part owner in the Palo Verde Nuclear power station near Phoenix and, in New Mexico, is constructing a geothermal hot water generator and a pumped storage facility

### Utility Issues (Continued)

Electricity Continued: and is planning a 2,000 megawatt coal-fired generator to be started in the mid-1980s and completed within a decade.

In late 1979, when TGT placed its Craig I and II coal-fired power plants into operation, WAPA supplied spinning reserves to TGT on an almost daily basis--due to short falls at the above mentioned plants--at a cost of nine to ten times the ongoing contract price. At that time, TGT's reserve margins were estimated at under 5 percent of capacity. By contrast, PNM's reserve margins are above industry standards. Since PNM has been successful in licensing new power plants in a timely manner, PNM's reserve margins range between 20 percent and 30 percent for the foreseeable future. These exceptional reserve margins coupled with PNM's excellent reliability index point to a wholly adequate and reliable source of electrical power for the CSOC in Albuquerque.

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As for rates, TGT rates have increased at an annual average of approximately 11 percent in the period 1974 to date. Given that history, there is no reason to believe that the currently low MV electric rates will prevail in the Colorado Springs area. As the region's demand for power increases requiring further generation of oil-, gas- and/or coal-fired electricity, this rate structure will have to be adjusted upward to cover costs. On the other hand, PNM projects that its rate will be well below the rate of inflation for the next five years and not above the rate of inflation beyond then for the foreseeable future.

The figures listed below detail the capital costs involved in bringing power to the Albuquerque site and to the Colorado Springs site.

	Kirtland AFB	Peterson AFB
Transmission	\$187,000 to \$ 750,000	\$ 375,000 to \$1,650,000
Substation(s)	\$726,000 to \$1,160,000	\$1,452,000 to \$2,320,000
Total	\$913,000 to \$1,919,000	\$1,827,000 to \$3,970,000
Average	<u>\$1,412,000</u>	<u>\$2,900,000</u>

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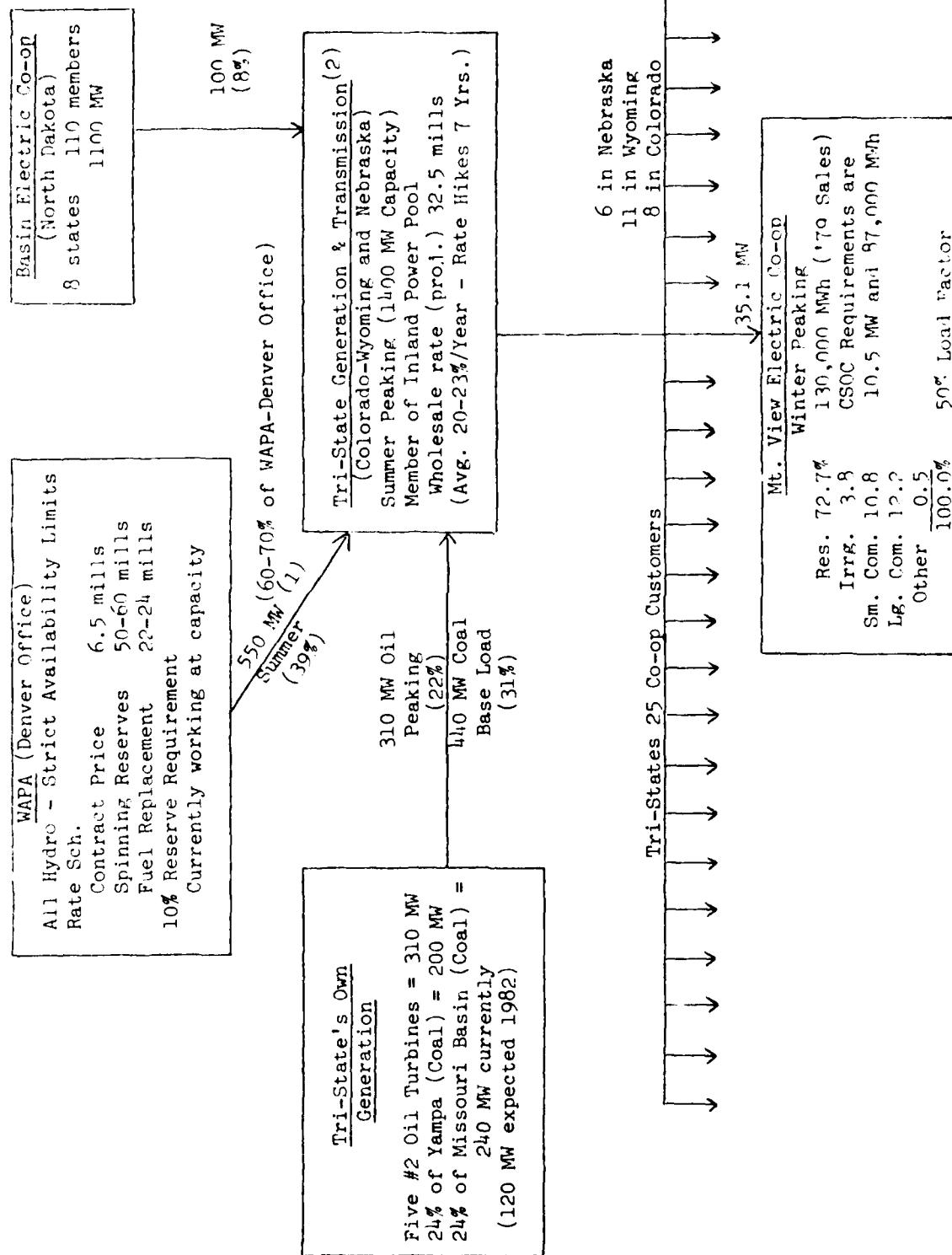
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EXHIBIT  
 MOUNTAIN VIEW ELECTRIC CO-OP  
 GENERATION, TRANSMISSION & DISTRIBUTION INTER-RELATIONSHIP



(1) Winter Peak Limit 400 MW

(2) Currently selling excess coal production, but reserve margin is questionable since TM has refused to fire unoil plant in the past.

### Utility Issues

Water: In Albuquerque, CSOC site could be partially supplied with water from underground wells at Kirtland. Preferable, however, would be the use of Albuquerque City sources. An extension of about half a mile would be required from the existing service point at Manzano, unless a storage tank at the antenna site would not be feasible, in which case, 2.5 miles of line would have to be added.

Assuming that the half-mile extension will be sufficient at Albuquerque and that the Colorado Springs service would require a three-mile extension, the cost differential in favor of the Albuquerque location would be about a third of a million dollars. In addition, in terms of monthly usage, Albuquerque residents pay \$9.94 for 24 units, whereas those outside city limits pay \$13.83; compared with Colorado Springs costs of \$20.28 and \$30.80, respectively. Moreover, Kirtland negotiates rates that are even lower than those that City residents pay.

82

Concerns expressed in the land acquisition section of this response are also important to note. Clearly the expenditure of public monies would be far less in Albuquerque than in Colorado Springs, both for capital improvements and for operating costs with respect both to the CSOC and to the associated housing.

### Utility Issues (Continued)

Natural Gas: In Albuquerque, service to U.S. government installations over the three months of August, September, and October of 1980 averaged \$0.2967 per Therm per month, plus a service charge of \$310 per month. Service by the Gas Company of New Mexico (a commercial firm) is predicated on a proven reserve sufficient for 18 to 20 years, with continued development expected to extend well beyond this projection. Either a four-inch or a six-inch steel gas main could be extended to the proposed site from the existing Kirtland service main (a distance of four miles).

At Colorado Springs the extension would be 6.5 miles minimum (13 miles if the City is the supplier). Assuming costs of \$39,830 per mile for four-inch pipe and \$68,331 for six-inch pipe, the cost differentials in favor of Albuquerque are \$99,575 for the 2.5 shorter miles of four-inch pipe and \$170,827 for the six-inch pipe; and (in the case of City supply) \$258,895 for the 6.5 shorter miles of four-inch pipe and \$444,151 for the six-inch pipe.

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Therefore, assuming that because of the distances involved the Colorado Springs site would require a six-inch gas line and the Kirtland site would require a 4-inch gas line. The additional capital expense for natural gas at Colorado Springs would be between \$170,827 and \$284,831. Since it has not yet been determined which gas Company would serve the CSOC site in Colorado Springs, no rate figures are available for comparasion with those of Kirtland Air Force Base.

### Cost of Living Issues

The cost-of-living indexes of both Albuquerque and Colorado Springs are below the national average. Colorado Springs shows an advantage of 2.5 percent lower cost of living; but because of sampling errors, any percentage lower than 3 percent is regarded as insignificant.

To adjust the percentage, see the water rates and waste treatment rates in the Utilities section of this response, which are not included in cost-of-living indexes. The figures were obtained from the American Chamber of Commerce Research Association.

Tax rates in the two communities are quite different. Albuquerque's retail sales tax rate is 25 percent lower than Colorado Springs. Individual income tax rates favor New Mexico over Colorado Springs by over 200 percent at the lower end and continues to favor New Mexico through six-digit salaries.

### Comparison of Taxes in Colorado Springs and Albuquerque

	<u>Albuquerque</u>	<u>Colorado Springs</u>
<u>Retail Sales Tax</u>		
State	3.75%	3.00%
City	<u>0.25%</u>	<u>2.00%</u>
Total	4.00%	5.00%
<u>State Individual Income Tax</u>	0.8% on less than \$1,000 to 9% over \$100,000	2½% on \$1,000 or less to 8% over \$10,000
<u>Property Tax Mill Levy</u>	57.36	78.38
<u>Assessment Rate</u>	33.33%	30.00%

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### School Issues

Compared with Colorado Springs' 15, Albuquerque operates but one public school district, consisting of 74 elementary schools, 22 middle schools, 10 high schools, and 6 alternative schools. Over 700 portable classrooms are inventoried by the district to adapt rapidly to changing student enrollment at any grade level. A \$6 million bond issue that passed in 1980 ensures continuation of school building enhancements and construction. It should be noted that Albuquerque has passed all 26 previous bond issues for its public schools.

85

A uniform statewide per pupil funding formula ensures equitable funding for any neighborhood that might be chosen for living by a CSOC employee with school children. Eighty-five percent of school costs are financed from a state general fund into which tax revenues would funnel from a CSOC population. Modest additional federal funds could be generated for the local school district, but these are not essential for progress. By 1982 to 1984, expected decline in school population will create ample space and facilities for any increase in population.

In the area of higher education, Colorado Springs offers a branch of the University of Colorado, one private business college, and a community college. The University of Colorado branch in Colorado Springs offers graduate degrees in business administration, education, and public affairs, but none in science, technology, or engineering.

The University of New Mexico main campus is located in Albuquerque. The University offers graduate degrees through the post-doctoral level in all engineering areas and in public affairs, humanities, science, and business management.

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The University of Albuquerque is a four-year college offering undergraduate degrees in business, criminal justice, science, education, and humanities, and certificated programs in nursing, medical technology, and police science.

The Albuquerque Technical-Vocational Institute (T-VI) is a hands-on school where technical skills are taught in electronics, accounting, mechanics, office services, refrigeration, and air conditioning, etc. In cooperation with the University of New Mexico, T-VI will soon offer a general college course of study leading to two-year technical degrees.

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### Labor Availability Issues

The Draft EIS assumes that all personnel, including construction workers, will be brought in from outside the locales studied. A more realistic view would be that most of the people will be hired from the local community. Albuquerque has a civilian labor force of 208,000, of which 17,900 or 8.6 percent are unemployed. Colorado Springs has a civilian labor force of 125,000, of which 5,375 or 4.3 percent are unemployed. Therefore, almost three times the number of workers are available in Albuquerque for construction and services employment.

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Even with the reduction in employment of 1,300 that may result from the Colorado Springs ADCOM realignment before FY 1983 added to the 5,375 now unemployed in Colorado Springs, there would still be 11,225 more persons unemployed in Albuquerque. Drawing against that considerably larger labor pool in Albuquerque, and thereby helping to meet the correspondingly greater employment needs, the CSOC facility would generate 2,000 primary jobs and create many secondary employment opportunities for local residents.

### Purported Savings Issues

Material supplied by the late U.S. Congressman Harold Runnels details the comparative construction cost at both locations. It is difficult to ascertain whether the summary figures include pavements, utilities, and other quantifiable elements, or whether only the principal structures and the antenna field are represented. Assuming that all the elements have been included, one notes that while the site at Kirtland would cost \$11.9 million less than at Colorado Springs, the advantages of co-location with existing facilities near Colorado Springs (SPADOC) are claimed to save \$17 million over a ten-year period as a consequence of projected sharing of common support equipment and manpower.

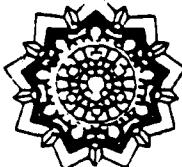
Neglected in this comparison is the present value of money. The \$17 million in savings in operation and maintenance over a ten-year period for a facility at Colorado Springs (equivalent of \$1.7 million per year) has a present value of \$11.5 million. This amount, when compared to a capital investment savings in favor of Kirtland AFB of \$11.7 million, renders both locations equivalent in terms of cost.

Regarding the close coordination issue, what is important is that the communications are basically electronic and there is no particular advantage in being within 20 miles of SPADOC--or within 400 miles. It is highly improbable, if not impossible, that a shared terminal will be feasible; it is virtually certain that two DSCS terminals would become fact at Colorado Springs.

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The necessity for a dedicated computer installation is evident wherever the facility is located. The amount of data and the priority that may have to be attached to its reduction and analysis would prohibit any shared arrangement with another agency that might have equally important demands upon the system, or that, as the owner-controller, would simply usurp capacity for perceived primary needs.

It is also not likely that there are any scarce manpower resources available for easy transfer to the operations of the CSOC. Where are the excess forces to be found if not at some currently over-manned operation?



# Department of Local Affairs Colorado Division of Planning

Philip H. Schmuck, Director



Richard D. Lamm, Governor

State Clearinghouse  
State Cartographer  
State Demographer  
Land Use Commission  
208 Water Quality

## MEMORANDUM

DATE: December 18, 1980

TO: Steve Ellis  
Colorado Clearinghouse

FROM: Philip H. Schmuck  
Division of Planning *Phil*

SUBJECT: Department of Air Force, Consolidated Space Operations Center  
#80-156

DEC 23 1980  
DIV. OF PLANNING

The Division of Planning has reviewed that portion of the Draft Environmental Impact Statement for the Consolidated Space Operation Center that pertains to the preferred alternative near Colorado Springs. The Draft EIS appears to raise the major issues that are likely to occur with the prospect of up to 6,100 additional persons in the Colorado Springs area.

While realizing that 6,100 persons is a worst case situation, the Division is concerned about the brief consideration given to mitigation measures especially in the areas of housing, land use, and transportation. It appears from the Draft EIS that there is not adequate military housing for military personnel, that civilian housing can be provided only at the expense of reducing the vacancy rate to extremely low levels with its attendant upward pressure on housing costs, that the arrival and departure of 810 vehicles during the morning and evening rush hours will result in regular if temporary traffic jams both at the consolidated space operation center itself and along highway 94, and that this increased use of highway 94 will bring increased development pressure on lands along that road outside the area considered for future development in the Colorado Springs and El Paso County plans. The housing and land use issues are not addressed in the mitigation measures section on page II-11 and the traffic question is dealt with inadequately. 89

Each of these issues is beyond the ability of the Air Force to resolve unilaterally; each requires action and cooperation by other state, local and federal agencies. For this reason, the Division is especially concerned with the comments "...only those mitigation measures which the Air Force has the authority to implement are proposed..." in the Draft EIS. If this

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Steve Ellis  
December 18, 1980  
Page Two

position is taken by all parties, intergovernmental and interagency solutions are precluded and many problems and opportunities could go unaddressed. We believe that it would be a very constructive and necessary step for the Final EIS to address as complete a list as feasible of mitigation measures for the problems identified in the EIS, especially those requiring intergovernmental or interagency action and proposed means of implementing all such measures. 89

PHS/amn



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DEPARTMENT OF  
FINANCE AND ADMINISTRATION  
STATE PLANNING DIVISION

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DIRECTOR

JOE GUILLEN  
DEPUTY DIRECTOR

December 15, 1980

Mr. Carlos Stern, Ph.D.  
Office of the Secretary  
of Air Force  
Department of Air Force  
Pentagon  
Washington, D.C. 20330

Dear Mr. Stern:

Enclosed are the responses of the New Mexico State agencies who have reviewed the Draft Environmental Impact Statement for the Consolidated Space Operations Center. The State Planning Division has also reviewed the proposal and supports the New Mexico site.

If you have any questions, please feel free to contact me at (505) 827-5191.

Sincerely,

*Betsy Reed*

Betsy Reed  
Planner

BR:bc  
Enclosure

PLANNING DIVISION  
(STATE CLEARINGHOUSE)  
REVIEW CERTIFICATION FORM

MIS 6

STATE PLANNING DIVISION  
DEPT. OF FINANCE & ADMINISTRATION  
505 DON GASPAR  
SANTA FE, NEW MEXICO 87503  
(505) 827-2073

TO: Carlos Stern, Ph.D., Dept. of Air Force

DATE: 12/15/80

SUBJECT: PRELIMINARY REVIEW  
FINAL REVIEW

STATE/AREA PLAN  
X ENVIRONMENTAL IMPACT STATEMENT

PROJECT TITLE: DEIS Consolidated Space Operations Center

APPLICANT: Department of Air Force

SAI NUMBER: 81 11 11 008 FEDERAL CATALOG NUMBER: 12-000

FEDERAL AGENCY: Department of Air Force Department of Defense

PROPOSED FUNDING (PER 424 FORM) AMOUNT

FEDERAL \$ \_\_\_\_\_

APPLICANT \_\_\_\_\_

STATE \_\_\_\_\_

LOCAL \_\_\_\_\_

OTHER \_\_\_\_\_

TOTAL \_\_\_\_\_

FOR FINAL APPLICATION ONLY:

REVIEW RESULTS:

The application is supported.  
The application is not in conflict with State, Areawide or Local plans.  
Comments are attached for submission with this application.

*William S. Dyer*  
LEAD AGENCY REVIEW COORDINATOR

*STATE PLANNING DIVISION*  
AGENCY

TO THE APPLICANT:

You may now submit your application package, this form and all review comments to the Federal or State Agency(s) from whom action is being requested.  
Please notify the Planning Division (Clearinghouse) of any changes in this project. Refer to the SAI number on ALL correspondence pertaining to this project.

*STATE CLEARINGHOUSE*

DATE

Approved July, 1979

Secretary, DFA

*William S. Dyer*  
STATE PLANNING DIVISION DIRECTOR

12/15/80  
DATE

White: to Applicant.  
Green: for Federal Agency.  
Canary: SPD Copy.  
Pink: Lead Agency.  
Goldenrod: Federal Funds Tracking.

PLANNING DIVISION  
(STATE CLEARINGHOUSE)  
MIS-4  
Review and Comment

DATE: 11/24/80

TO: Kate Wickes, Natural Resources Dept.

FROM: Betsy Reed, State Planning Division

RE: 81 11 11 008 DEIS Consolidated Space Operations Center  
SAI NUMBER PROJECT TITLE

State Planning Division, DFA

LEAD AGENCY

Please review and comment on the above application and return to the sender by 12/10/80

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?

Yes (If yes, please identify these programs.)

XX No

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?

XX Not applicable

Yes

No (If no, please explain in what way it is not compatible.)

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?

Yes (If yes, please cite the conflicting statute, order, rule or regulation.)

XX No

4. Describe any suggestions or means of improving or strengthening the proposed application.

XX No interest in, or comment on, this project.

Proposal is supported.

Proposal is supported with recommendations.

Proposal is not supported.

Further information needed, review suspended and applicant notified of request.

Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

Kate Wickes  
Signature of Reviewer

December 9, 1980  
Date

Approved July, 1979  
Secretary, DFA

Director, Administrative Services Division  
Title

Natural Resources Department  
Agency

1 - white - to applicant  
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2 - pink  
1 - lead agency  
1 - review division

PLANNING DIVISION  
(STATE CLEARINGHOUSE)  
MIS-4  
Review and Comment

DATE: 11/24/80

TO: Pat Romero, Commerce and Industry

FROM: Betsy Reed, State Planning Division

RE: 81 11 11 008 DEIS Consolidated Space Operations Center  
SAI NUMBER PROJECT TITLE

State Planning Division, DFA  
LEAD AGENCY

Please review and comment on the above application and return to the sender by 12/10/80

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?

Yes (If yes, please identify these programs.)  
 No

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?

Not applicable  
 Yes  
 No (If no, please explain in what way it is not compatible.)

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?

Yes (If yes, please cite the conflicting statute, order, rule or regulation.)  
 No

4. Describe any suggestions or means of improving or strengthening the proposed application.

No interest in, or comment on, this project.

Proposal is supported.

Proposal is supported with recommendations.

Proposal is not supported.

Further information needed, review suspended and applicant notified of request.

Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

*Patricia T. Romero*  
Signature of Reviewer

Assistant Secretary of Commerce  
and Industry

December 4, 1980

COMMERCE AND INDUSTRY DEPARTMENT

Date

Agency

Approved July, 1979  
Secretary, DFA

III-79

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1 - review division

PLANNING DIVISION  
(STATE CLEARINGHOUSE)  
MIS-4  
Review and Comment

DATE: 11/24/80

TO: Orlando Giron, Department of Education

FROM: Betsy Reed, State Planning Division

RE: 81 11 11 008 DEIS Consolidated Space Operations Center  
SAI NUMBER PROJECT TITLE

State Planning Division, DFA  
LEAD AGENCY

Please review and comment on the above application and return to the sender by 12/10/80

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?

Yes (If yes, please identify these programs.)

No

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?

Not applicable

Yes

No (If no, please explain in what way it is not compatible.)

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?

Yes (If yes, please cite the conflicting statute, order, rule or regulation.)

No

4. Describe any suggestions or means of improving or strengthening the proposed application.

No interest in, or comment on, this project.

Proposal is supported.

Proposal is supported with recommendations.

Proposal is not supported.

Further information needed, review suspended and applicant notified of request.

Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

Betsy Reed  
Signature of Reviewer

12/10/80

Date

Approved July, 1979  
Secretary, DFA

Betsy Reed  
Title

Agency

PLANNING DIVISION  
(STATE CLEARINGHOUSE)  
MIS-4  
Review and Comment

DATE: 11/24/80

TO: Robert H. Duran, State Highway Dept.

FROM: Betsy Reed, State Planning Division

RE: 81 11 11 008 DEIS Consolidated Space Operations Center  
SAI NUMBER PROJECT TITLE

State Planning Division, DFA  
LEAD AGENCY

Please review and comment on the above application and return to the sender by 12/10/80

1. Does this plan duplicate any programs which have similar goals and objectives to the proposed application?

       Yes (If yes, please identify these programs.)  
 No

2. Does the proposed application conform with a comprehensive plan developed for the area in which it is located?

Not applicable  
       Yes  
       No (If no, please explain in what way it is not compatible.)

3. Does the proposed application conflict with any applicable statute, order, rule, or regulation (federal, state or local)?

       Yes (If yes, please cite the conflicting statute, order, rule or regulation.)  
 No

4. Describe any suggestions or means of improving or strengthening the proposed application.

       No interest in, or comment on, this project.

Proposal is supported.  
       Proposal is supported with recommendations.  
       Proposal is not supported.  
       Further information needed, review suspended and applicant notified of request.  
       Comments attached.

On the basis of my review, I have indicated my response and/or recommendations above.

C.W. Conroy  
Signature of Reviewer

Planning Director

Title

12/5/80  
Date

New Mexico State Highway Department

Approved July, 1979  
Secretary, DFA

Agency

- 1 - white - to applicant
- 1 - yellow - SPD copy
- 2 - pink
- 1 - lead agency
- 1 - review division

RESPONSE TO COMMENTS  
FROM STATE AGENCIES

Colorado Division of Wildlife

61. The Draft EIS was prepared under the latest CEQ regulations which are intended to reduce the inclusion of extraneous material. In this regard, those areas where no adverse impact is anticipated, were omitted from the original Draft EIS. However, since the commentor is concerned about the exclusion of a discussion on wildlife and vegetation, the following paragraphs are submitted:

Wildlife and Vegetation at the Peterson AFB/Colorado Springs Location

The selected locations for the CSOC are in the Grassland biotic zone which typically occurs below 6,300 feet MSL. Within the Grassland ecosystem are three divisions: prairie grasslands, meadows, and mountain grassland. Sections 24 and 26 are within the prairie grassland division. The CSOC area has been partially grazed by domestic cattle and is adjoined by lands used for wheat farming and grazing. The gently rolling topography and local weather conditions cause much of the plains to be highly susceptible to soil erosion by wind. Removal of vegetative cover (through overgrazing or grading) can add to this erosion. Therefore, extra care is essential to assure that any graded areas are quickly revegetated.

The variety of wildlife (including birds, amphibians and reptiles) that are likely to be found in the general vicinity of the CSOC location are listed in the "Environmental Resources Study, Part E: Wildlife Appendices", William E. Lautenbach, 1974, Resource Planning Associates, Inc., Fort Collins, Colorado, prepared for Pikes Peak Area Council of Governments. A wildlife count obtained in the months of January and February in the vicinity of the CSOC location revealed the occasional presence of Pronghorn Antelope and Coyotes. Cotton-tails, Blacktailed Jackrabbits and Whitetailed Jackrabbits were more numerous. Birds observed in the area consisted of: Horned Lark, Black-Billed Magpie, Rough-Legged Hawk, W. Meadowlark, Dove, Northern Shrike, Ferruginous Hawk, and a Golden Eagle. Many of the birds inhabiting the CSOC location are considered to have a low tolerance for man (i.e., hawks, falcons, owls and eagles). A wide variety of amphibian and reptile species are inhabitants of the eastern plains and in the CSOC vicinity salamanders, toads, frogs, lizards and snakes can be expected to be found.

Of the many species of mammals, birds, amphibians and reptiles known to inhabit the prairie grasslands, only one is on the Endangered List - the Black-footed Ferret. No evidence has been found to indicate that this endangered animal resides or forages in the vicinity of the CSOC.

Wildlife and Vegetation at Kirtland AFB/Albuquerque Location

Wildlife on the base is so sparse that in the best interests of ecology, safety and security, hunting is not allowed. The base does support a variety of wildlife, however, which consists primarily of birds and animals (rodents) that feed on grasses and range plants. In the grassland association comprising most of the base, horned larks, meadowlarks, thrashers, predatory birds (hawks, owls, vultures), sparrows, quail and mourning doves are the most prevalent bird species. Rodent population includes mostly the Rock Squirrel, various species of rats and mice, and several species of ground squirrels. Toads, lizards and snakes are also prevalent.

The vegetation of Kirtland East, in the vicinity of the antenna site, is classified in the Grassland Association. Black grama, sand muhly, threeawn, Indian ricegrass, six-weeks grama, fluff grass and spike dropseed are common in this area. Shrubs in this association include sand sage, winter fat and saltbush.

There are no known threatened or endangered species of plants or animals that are located on the base.

#### Wildlife and Vegetation at Malmstrom AFB/Great Falls Location

The areas to be affected by the CSOC facility under either Options A or B are now developed or have been previously disturbed (the antenna field includes part of the abandoned runway system). The impact on vegetation and wildlife is correspondingly minimal at the Malmstrom AFB location. There are no known threatened or endangered species of plant or animal life associated with the base. The biota on the base presently consists mostly of native grasses and small rodents.

62. The traffic increase on Highway 94 will undoubtedly cause an increase in the mortality rate of wildlife due to the increase in traffic brought about by the CSOC facility. The extent of this impact is difficult to quantify but is directly related to the increase in traffic on this highway. To the extent that CSOC employees participate in car or van pooling and thereby reduce the number of CSOC vehicles added to Highway 94, this impact would be mitigated.

63. Undergrounding of power lines will be evaluated during the engineering design phase of CSOC. Factors to be taken into consideration include installation costs (trenching and oil cooling vs overhead poles and lines), right-of-way/easement costs (underground vs. overhead), disruption to agricultural activities if underground lines cross land used for growing crops, reliability (underground is less subject to vandalism and storm damage), maintenance factors, and aesthetics. There are no requirements at the present time which mandate underground installation or construction of perches on aboveground transmission poles. Transmission lines in the east El Paso County High Plains area have been installed aboveground and without perches. Standard specifications for aboveground power lines, however, dictate a minimum horizontal and vertical separation between lines to allow for safe flight of large predatory birds.

#### Montana Department of Highways

64. Traffic data included in the Draft EIS was provided by the State Department of Highways and represented the latest information available at that time. The traffic data has since been revised to reflect more recent conditions. Even though the latest traffic counts are almost half of those previously used in the Draft EIS, the traffic analysis and conclusions reported in the Draft EIS are not affected. Figure 14 in the Draft EIS has been corrected (as shown on the following page) to reflect the latest available information.

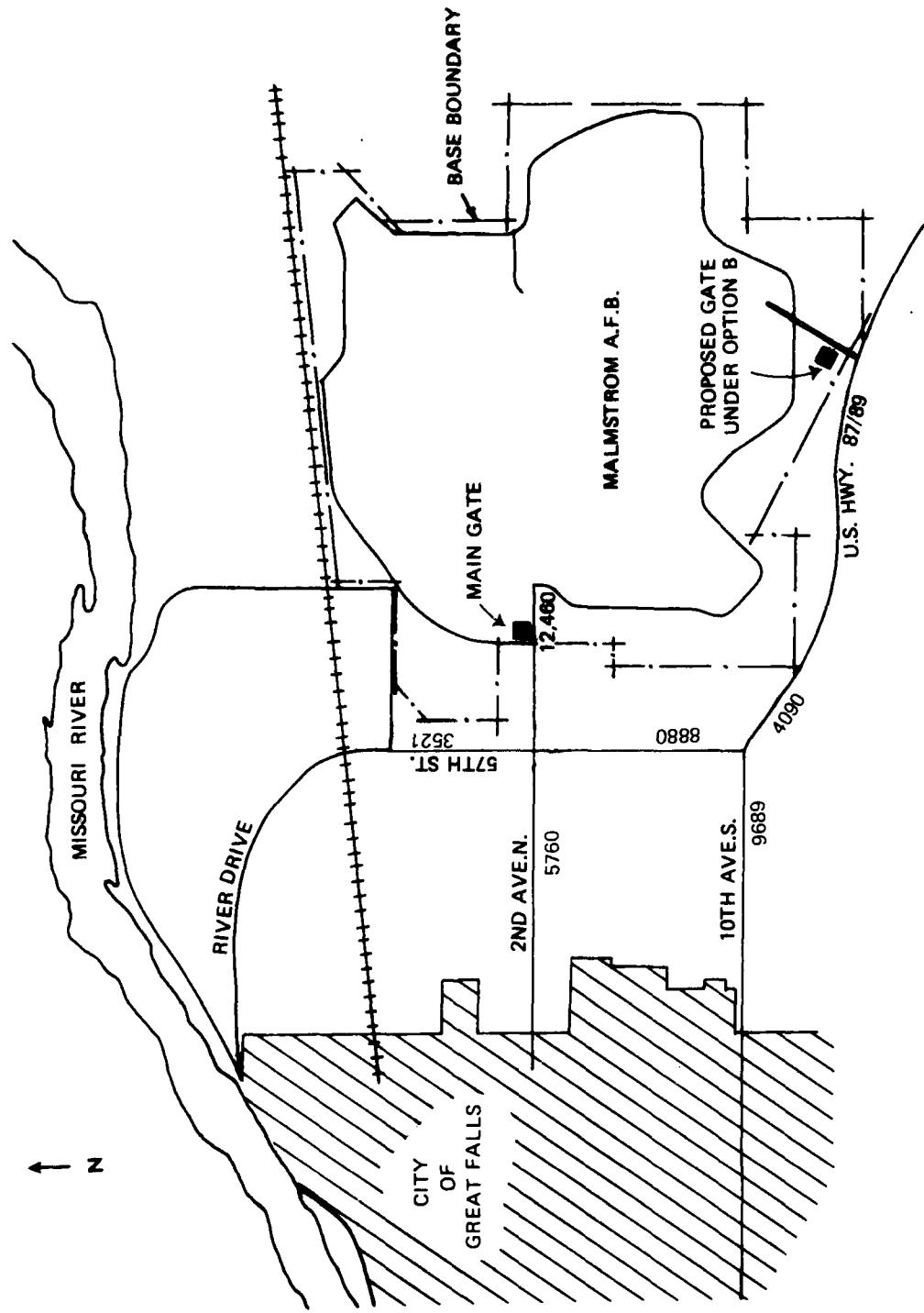


Figure 14 1980 Average Daily Trips in Vicinity of Malmstrom AFB

65. It is so noted that the Great Falls Policy Coordinating Committee has recently agreed to pursue the South Bypass Arterial and have deposited \$500,000 from the Transportation Improvement Fund for advanced right-of-way acquisition.

66. See response to Comment No. 64 on page III-83.

67. The Draft EIS analysis for motor vehicle emissions makes use of EPA Mobile Source Emission Factors that are part of the Mobile 1 model. AP 42 Supplement 5 Mobile Source Emissions Factors were not used to estimate the motor vehicle emissions tabulated in the Draft EIS.

State of New Mexico, Office of the Governor

68. The security system at CSOC will be composed of a double line of fences installed at a distance of approximately 1000 feet from the facility. This barrier system will be alarmed, lighted, and under surveillance of closed circuit television. A security fence composed of entry controllers, alarm monitors, a Command and Control element and an armed response force will be in-place at the site. A dedicated back-up force would be deployed from the support base. A simple installation boundary fence would also be required to mark the federal property line. The additional installation fence would not be required at the Manzano site. Although Manzano is inherently more remote and easier to secure than the Colorado Springs location, this tactical advantage will not translate into a cost advantage. The dedicated saboteur will not be inhibited by the fact that Kirtland will have to be as elaborate as the one installed at the Colorado site. The fences at the old Manzano storage site do not meet current Air Force criteria and would probably not be used in a CSOC security system. Sections of the existing fence might be salvageable but that determination would have to be made as part of an on-site security survey. The electrical fence would not be used in any case. State-of-the-art security systems would have to be employed.

The back-up force at Kirtland would have an inherent time/distance advantage over the one at Peterson Field. On the other hand, a special back-up force would have to be funded and authorized at either location.

69. This comment deserves amplification on the 'unregulated development' issue at the Colorado Springs location. The land surrounding the CSOC location at Colorado Springs is presently unzoned. Under County and State subdivision law, creation of any parcel of land under 35 acres in size is required to go through the subdivision process. This process includes a requirement for zoning. In other words, parcels under 35 acres in size can not be created without obtaining zoning from the local jurisdiction. On the other hand, for those parcels that are already 35 acres or smaller, commercial development could occur without further subdivision or zoning. In either situation, development which precedes general planning and the implementing zoning, could result in undesirable spot commercial along Highway 94.

70. The referenced environmental analysis is an areawide EIS that covers the metropolitan Colorado Springs area. It is intended to be used as a Master EIS primarily for expediting the processing of residential projects within the Colorado Springs urban area. The CSOC program does not entail a residential development per se' and the CSOC facility is located outside of the urban area covered by the referenced EIS.

71. Sections 24 and 26 (at the Peterson AFB/Colorado Springs location) have not been used for growing food or feed crops. They have been leased in the past for grazing purposes; based on the average grazing acreage required per head of cattle, approximately 4-5 steers could be supported by each section.

72. The amount of land required to locate the CSOC facility, which includes a co-located antenna facility, is 107 acres. In order to insure both physical security and an electromagnetic radiation hazard safety zone, a 1000-foot buffer zone is planned around the CSOC facility. Adding the 1000-foot buffer zone requirement to the 107-acre facility requirement brings the total acreage requirement to approximately 440 acres. The sections of land located in El Paso County that the Air Force is interested in, are each 640 acres and under State of Colorado control. Either parcel should be adequate for future expansion.

73. Rights-of-way, easements, water rights, etc., are pertinent at the Colorado Springs location where the CSOC site is located off-base. Property ownership of these sites is identified in Section III.A.2 of the Draft EIS; there are no easements or other restrictions on either section that have been identified to-date. Until such time that precise alignments are known for the extension of power, gas and water lines, these issues cannot be defined for the Colorado Springs CSOC location. This information will be forthcoming in the engineering design phase of the CSOC project.

At Kirtland AFB, the additional water required by the CSOC facility would not cause the base to exceed their pumped water allocation (as established by court order).

74. See response to Comment No. 12 on page III-27.

75. See Comment No. 29 (page III-12) and response to Comment No. 29 (page III-31).

76. See response to Comment No. 68 on page III-85.

77. This information is helpful as additional background material for Section III.B.7 of the Draft EIS.

78. See responses to Comments No. 16 (page III-28) and No. 105 (page III-130).

79. See Comment No. 93 (page III-93) and response to Comment No. 93 (page III-128).

80. The average vehicle miles traveled per day by the CSOC employees and their families is estimated to be 62,490 at the Peterson AFB/Colorado Springs location, 61,050 at Kirtland AFB/Albuquerque, and 26,660 at Malmstrom AFB/Great Falls. The estimating accuracy for predicting total miles traveled leads to the conclusion that the Colorado Springs and Albuquerque locations are comparable to each other and any cost savings based on total miles traveled is negligible.

81. The comparisons of utility cost and availability presented here are somewhat hypothetical. To the extent that these costs can be accurately estimated prior to facility design, they will be considered in the final site selection decision.

The Mountain View Electric Association, Inc. has indicated to the Colorado Springs Chamber of Commerce by letters dated April 1 and May 21, 1980 that they are confident they can deliver electricity to CSOC with a high degree of reliability. The peak demand of CSOC, 10.5 megawatts, would amount to 0.5%-0.9% of the annual total peak load estimates of Tri-State Generation and Transmission for the period 1981 through 1993.

82. There should be no need for a connection to Albuquerque City sources as CSOC could easily be supplied within Kirtland's present pumped water allocation. Supplying the antenna site would involve a choice between hauling water to a storage tank or extending a small line the 2.5 mile distance. The cost of such a water line, however, should not be equated with that of a main supply line for the CSOC facility, as the comment implies.

83. The comparisons of utility cost and availability presented here are somewhat hypothetical. To the extent that these costs can be accurately estimated prior to facility design, they will be considered in the final site selection decision.

84. The tax information presented for Albuquerque and Colorado Springs is helpful as additional background information for Sections III.A.9.4 and III.B.9.4 of the Draft EIS.

85. It is so noted that the \$6 million bond issue referred to in the Draft EIS on the bottom of page III-41, has now been passed by the voters.

86. The information on educational facilities in the Colorado Springs and Albuquerque area is so noted.

87. The Draft EIS was published using the latest data available at that time. More recent 1980 statistics are as follows:

<u>Location</u>	<u>Civilian Labor Force</u>	<u>Unemployment Rate</u>	<u>Total Unemployed</u>
Colorado Springs	133,522	4.3%	5,741
Albuquerque	204,400	8.2%	16,000
Great Falls	32,800	8.0%	2,624

Although the unemployed labor force in Albuquerque is almost three times that in Colorado Springs, it is not known how many of the unemployed are construction workers.

88. All cost avoidance computations were based on Fiscal Year 1979 dollars.

The Air Force does consider the sharing of a Defense Satellite Communication System (DSCS) terminal with the Cheyenne Mountain Complex to be feasible. Terminal sharing is expected to result in cost avoidance of about \$2.4 million in construction funds, \$5.3 million in hardware procurement, \$2.3 million in payroll (over 10 years) and \$3.25 million in operations and maintenance costs (over 10 years). Thus, the total potential cost avoidance through sharing the DSCS terminal is about \$13 million. (Note: The use of a 10-year life cycle is for illustration only; CSOC operations are expected to continue for a longer period.)

The terminal proposed to be shared is that which is already programmed for construction for support of the Cheyenne Mountain Complex, not a currently existing terminal.

89. The section dealing with mitigation strategies has been expanded to include those outside the ability of the Air Force by itself, to implement (see pages I-4 through I-6 of this document). These strategies are included as Air Force suggestions only. For the most part these measures would have to be implemented by state and local authorities if they are to take place.

The following specific subjects of the comments are addressed:

Traffic: Refer to responses to Comments No. 99 - 101 (page III-130).

Land Use: Refer to response to Comment No. 97 (page III-129).

Housing: See following paragraphs.

89. Continued . . .

Federal Public Policy is to rely on the adjacent private community as the prime source for housing military families. The Air Force is in compliance with this policy and houses only 39% of its families in government-owned or controlled housing; at Peterson AFB, the Air Force houses only 18%.

Only when the private sector cannot support with a sufficient number of 'suitable' housing units may the Air Force program and construct military housing. The support in the Colorado Springs area has been good; the family housing survey as of January 1980 indicates a deficit of only 199 units of which 127 (64%) were unsuitable due to cost. With the introduction of Variable Housing Allowance (VHA) in October 1980, virtually all of the deficit of adequate (suitable) housing will disappear. This means there is no significant shortage of housing for military personnel in the Colorado Springs area.

Further, the addition of 318 military personnel to support subject mission adds about 205 military families to the area; this is insignificant in the light of about 112,000 households in the Colorado Springs area. The big increase in family housing requirements comes in the civilian work force (mostly contractor employees) which will require about 1600 houses. The total family housing need of about 1900 appears to be well within the reported 4,300 units presently for rent or sale, without considering future growth in the housing market. It is agreed that as the vacancy rates decrease, rental prices tend to rise. However, this situation is usually short-lived as new starts become more attractive and the balance of supply and demand is soon realized. Therefore, with some growth in housing almost certain, there does not appear to be a significant adverse housing impact on the community.

LOCAL AGENCIES

Comments and Responses

Comments: No. 90 through No. 114  
(Pages III-90 through III-127)

Responses: Pages III-128 through III-132



EL PASO COUNTY

**LAND USE DEPARTMENT**

27 EAST VERMILIO

COLORADO SPRINGS, COLORADO 80903

December 11, 1980

Dr. Hans Mark  
Secretary of the Air Force  
Washington, D.C. 20330

Dear Dr. Mark:

El Paso County has just completed its review of the Draft Environmental Impact Statement on the Consolidated Space Operations Center. Our staff has raised some issues which you should be aware of. Locating the Center within the County is desirable from our point of view. We realize that many factors must be evaluated by you and your staff before a final decision is made. We feel that the best possible information should be available for such an action.

A copy of the County's comments are attached for your consideration. The gist of the comments is that the Draft Statement contains what we surmise to be a bias on the part of the authors. In reading the document, it seems as though a broad-brush analysis has been given to certain factors in locating the Center at Albuquerque, while these same factors have been dealt with in more detail for this area.

In some instances, it appears that the "best-care" situation has been cited for Albuquerque and the "worst-care" situation given for El Paso County. As noted in the attachment, there are instances within the document when obsolete data has been used in the evaluation of Colorado Springs. Such inconsistencies should be corrected to accurately reflect the local situation.

Thank you for your attention to this matter. Please call if you have any questions.

Respectfully,

William T. Wildman  
Director

WTW:hgb  
Enclosure

III-90

1626-80

ADDITIONAL COMMENTS:

The El Paso County Land Use Department Staff has reviewed the Draft Environmental Impact Statement on the Consolidated Space Operations Center and found, except in a few instances, it to be generally correct. As expressed in a Joint Resolution dated October 9, 1980, El Paso County supports location of the Consolidated Space Operations Center locating within this jurisdiction. A copy of said Resolution is attached to these comments. The conclusions of the Draft Environmental Impact Statement are consistent with those drawn by the staff, in that, minimal environmental degradation will occur from the siting, construction, and operation of the Center.

Within the Draft document there are several statements which have raised questions and generated comments. Such questions and comments will be presented by major subject in the order appearing within Table 2, "Summary of Environmental and Socioeconomic Impacts," of the document.

Air Quality: The statements contained within the Draft Statement appear valid and it is assumed that the Pikes Peak Area Council of Governments will prepare a more detailed evaluation of the associated impacts.

Utilities: Comments on utilities are more appropriate from the potential service entities listed within the document. There are, however, several observations that should be made here. The projected population associated with the Consolidated Space Operations Center should be equated to service demands on a total-system basis as well as possible individual sources. There may be some inconsistency within the document because of the shifting between the two points of reference. That is, in one section the increase in population is evaluated in terms of total future service potential while in other sections the evaluation is made in terms of an individual supply source. As an example, on page IV-12 an evaluation is made in terms of potential service to be provided by the Fryingpan-Arkansas Project. Accordingly, a figure of 13% is used to represent the amount of "new service population" that will be taken up the the Consolidated Space Operations Center. On an overall City system, however, the Consolidated Space Operations Center population equates to only 1.9% of the potential overall serviceable population.

On page IV-16 there may be some inconsistency. It is stated that an increase in power production from 500MW to 900MW will mean only 76,000 additional people can be served by the City. The current 500MW services over 250,000 people in 1980, or .002MW per person. An additional 400MW should equate more closely to an additional 200,000 people, not 76,000 people. This means that the associated Consolidated Space Operations Center population would only represent 3% of the potential new service, not the 8% stated. 91

Archaeological/Historical Resources: The Historic Sites & Structures, El Paso County, Colorado prepared in 1977 does not identify any significant historical or archaeological sites within 3 miles of the site. The statements within the documents regarding these considerations are considered accurate and correct.

Construction: It is assumed that the documentation involving construction is valid as contained within the document and that further comment should come from the El Paso County Department of Transportation.

Visual: It is assumed that the visual analysis within the document is correct. As suggested in the report, screening with earth and plant materials on the site would probably block the visibility of the antennas from Highway 94 as well as obscure visibility of the site from Enoch Road.

Electromagnetic Radiation: Due to the expertise required to evaluate this aspect of the document, it is assumed that the analysis presented in the Draft Statement is correct. If such is the case, the amount of emissions anticipated at 10% to 50% below the current standard levels seems to be acceptable. The aspect of restricting air space does not appear to represent any difficulty. In the preparation of the Revised Airport Master Plan for Colorado Springs, the Airport Consultants have stated that consideration of the potential Consolidated Space Operations Center site was taken into consideration and that overflights of the site should not occur. Since the document addressed the primary concern to the activation of the electromagnetic explosive devices in aircraft due to power emissions from the site, it appears that this is a military problem that will be handled as a matter of course.

Traffic: As stated in the document, improvements are being made to Highway 94 and additional improvements are planned for during 1981 and 1982. The Draft Statement includes a discussion of Powers Boulevard and indicates that the construction of Powers will assist in the transportation needs of the Consolidated Space Operations Center. In addition, there are other road improvements which are not completely covered in the document. The County Planning Commission has endorsed a road system plan for the area between Drennan Road and Fontaine Boulevard including the Marksheffel Road corridor. Within this recently approved plan are proposed improvements to Marksheffel Road, a slight and improved re-alignment of Powers Boulevard and a new east-west road that could eventually connect to Drennan Road east of Jimmy Camp Creek. These modifications should improve the traffic situation for the Consolidated Space Operations Center. Although Highway 94 is the most logic primary route to and from the site, Enoch Road does connect with Drennan Road and with some improvement could provide a viable secondary or reliever route for the site. This point was not included within the document.

92

The Draft Statement implies some difficulty with the intersection of Highway 94 and Peterson Road. It is unclear, however, as to the actual significance of the traffic counts presented in the document (page III-3). A signalization improvement project is programmed for this intersection which may provide some mitigation of possible congestion problems. Based upon the document, it is uncertain what other road improvements would be necessary.

93

PUBLIC SCHOOLS: Some of the information presented within the document relating to school district capacities does not match that on file with the Land Use Department. The following is a comparision of the information presented in Table 10 on page III-21 of the Draft Statement and the information obtained by the Land Use Department.

94

School District:	Capacities in Draft Statement:	Capacities on file with the Department:
No. 2 - Harrison	At Capacity	2,345
No. 3 - Widefield	1,165	965

No. 8 - Fountain	190	740
No. 12 - Cheyenne Mountain	172	639
No. 14 - Manitou Springs	175	225
No. 22 - Ellicott	65	83
No. 38 - Lewis Palmer	278	103
No. 49 - Falcon	At Capacity	256

94

The Draft Statement indicates that the potential 2160 new students attributable to the Consolidated Space Operations Center may cause some difficulties in Districts No. 2 and No. 49. This may not be totally correct.

Housing: The Pikes Peak Area Council of Governments will probably submit detailed comments on the housing portion of the Draft Statement. There are several items which will be raised herein on a general level. The reference for the following comments is the Housing Market Analysis, Pikes Peak Region, 1980 prepared by the Pikes Peak Area Council of Governments.

On pages III-23, III-24, IV-51, IV-52, and IV-53 figures on the local housing stock are presented and certain conclusions are drawn. The Department has some questions relative to the data used and the conclusions presented in the document.

Draft Statement Data

Projected housing stock in 1985: 91,090

Projected vacancy rate in 1985: 4%

Current vacancy rates:  
Single Family - 1.59%  
Multi-Family - 7.75%

Monthly rental rate for a 2-bedroom apartment: \$300

"The impact of the C.S.O.C. project on the local housing stock could cause the overall vacancy rate to decrease below 2%; this would be considered an adverse impact on the housing market in that vacancy rates below 3% tend to cause artificial inflation of the selling prices and rental rates.

Housing Market Analysis Data

Current housing stock in El Paso County (1980): 112,110

Current overall vacancy rate for El Paso County (1980): 3.9%

Current vacancy rates:  
Single Family - 2.5%  
Multi-Family - 6.8%

Monthly rental rate for a 2-bedroom apartment: \$228

"For the last several years it has been felt that acceptable levels of vacancies for housing types are 2 percent for single family, 6 percent for multi-family, 2 per cent for mobile homes."

95

These possible inconsistencies should be addressed by the Consultant that assisted in preparing the Draft Statement.

General Cost/Revenue: The statements with the document are assumed to be substantially correct. The only area where some clarification may be appropriate is in the educational costs associated with the Consolidated Space Operations Center. As presented in the section on Public Schools, there may not be a capacity problem to the extent indicated within the Draft Statement. If this is true, the costs for "school re-openings" may not need to be included in the Cost/Revenue analysis.

96

Land Use Plans, Policies, and Controls: Pages IV-56 and IV-57 of the Draft Statement contain comments on local plans and policies as related to the Consolidated Space Operations Center. From the Land Use Department's point of view there seems to be a certain amount of misunderstanding on the part of the C.S.O.C. Consultant of what El Paso County's position is relative to the location, construction and operation of the Consolidated Space Operations Center. The interpretation of this position indicates that because of the location of the Consolidated Space Operations Center there will be a certain amount of conflict with County plans. This is not necessarily true.

97

The fact that the eastern part of the County is unzoned does not mean that local land use controls do not exist in the area. If a project is proposed in the eastern part of the County which involves subdividing land, zoning for that land must be obtained. This is in addition to the subdivision regulations which must be satisfied before development can occur. Zoning for the eastern part of the County has been evaluated in the past and because of the present lack of development pressure for the area zoning has not been implemented. If sufficient development pressure arose in the area, the County would consider implementation.

The statement in the document to the effect that there is a general absence of planning in the area is not quite correct. With the potential for development proposals on over 30,000 acres located east of the City, the Land Use Department has been conducting preliminary long-range planning in the area. Additionally, the Fountain Valley Plan production includes land that lies only 5 miles west of the Consolidated Space Operations Center site. The current effort to generate a Revised Airport Master Plan also includes investigation of land on the east side to the City and the Consolidated Space Operations Center site was included in the consideration of flight paths. 97

The Land Use Department along with the City of Colorado Springs and the Pikes Peak Area Council of Governments have competent staff and it can be demonstrated that there is and will be more than adequate response to planning needs in the community. If the Consolidated Space Operations Center is located at the proposed site the staffs can address all pertinent issues in a professional and complete manner.

Finally, on October 9, 1980 the County and the City passed a Joint Resolution relative to the Consolidated Space Operations Center. A copy of said Resolution is attached to these comments for reference. Within that Resolution both the City and the County assures all concerned that proper planning and necessary land use controls will be implemented as needed. The local jurisdictions are more than ready and able to ensure the compatibility of the Consolidated Space Operations Center with the local context and, likewise, are more than willing to ensure the integrity of the Consolidated Space Operations Center will not be jeopardized by future development. This section of the Draft Statement should probably be modified to more accurately reflect the local situation and the status of plan, policies, and controls within the community. 98

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS  
OF EL PASO COUNTY AND THE CITY COUNCIL OF THE CITY  
OF COLORADO SPRINGS EXPRESSING SUPPORT FOR THE  
LOCATION OF THE CONSOLIDATED SPACE OPERATIONS CENTER  
AND DIRECTING COUNTY AND CITY STAFFS TO CONTINUE  
SPECIFIC PLANNING ACTIVITIES TO FACILITATE THE  
INSTALLATION OF THE CENTER.

WHEREAS, it is the policy of the Board of County Commissioners of El Paso  
County and the City Council of the City of Colorado Springs to encourage location  
and development of land and facilities within the community that are economically  
beneficial to El Paso County and the City of Colorado Springs; and

WHEREAS, the Consolidated Space Operations Center to be located approxi-  
mately ten miles east of the City of Colorado Springs within El Paso County will  
directly benefit the local economy; and

WHEREAS, El Paso County and the City of Colorado Springs have continually  
conducted planning activities to ensure that new development and future growth is  
compatible with existing land use patterns, is compatible with local public service  
facilities, and is complimentary to local tax and market conditions within the  
respective jurisdictions; and

WHEREAS, the planning staffs of both jurisdictions and of the Pikes Peak  
Area Council of Governments have reviewed the proposed plan for location of the  
Consolidated Space Operations Center and find development of the site to present  
no serious environmental, service, or land use problems; and

WHEREAS, El Paso County and the City of Colorado Springs are completing  
approval of the 1981 local budget of which said planning activities are a part and  
in which it is desirable to allocate personnel and funds to specifically plan for  
the location and development of the Consolidated Space Operations Center;

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF  
EL PASO COUNTY AND THE CITY COUNCIL OF COLORADO SPRINGS:

Section 1. That the appropriate departments of the County and City will  
assign staffs and allocate funds within their 1981 budgets for the purpose of  
strengthening planning activities to assist with the location and installation  
of the Consolidated Space Operations Center.

Section 2. That appropriate land use controls have been adopted by El Paso County and the City of Colorado Springs and that authority exists for the adoption of further measures to ensure that the Consolidated Space Operations Center and the surrounding area are developed in an orderly and mutually compatible manner.

Section 3. That the Board of County Commissioners and the City Council as elected officials of the County and the City believe that the location and development of the Consolidated Space Operations Center will be beneficial to both the County and the City and will extend every effort to ensure this end.

Section 4. That El Paso County and the City of Colorado Springs will cooperate to the fullest with all Federal and State officials to facilitate the installation of the Consolidated Space Operations Center.

DATED this 9th day of October, 1980, at Colorado Springs, Colorado.

BOARD OF COUNTY COMMISSIONERS  
OF EL PASO COUNTY, COLORADO

ATTEST:

R. E. Parker  
El Paso County Clerk

CITY COUNCIL OF THE CITY OF  
COLORADO SPRINGS

ATTEST:

R. E. Parker  
City Clerk

By R. E. Parker  
Mayor

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



A 95 CLEARINGHOUSE REVIEW

Date: December 11, 1980 PPACG Identifier: 80-167

TO: Deputy for Environment and Safety  
ADDRESS: Office of the Secretary of the Air Force (SAF/MO) 114  
Washington, D. C. 20330

FROM: Patricia H. Denham, Environmental Coordinator *Pat*

PROJECT TITLE: Consolidated Space Operations Center/DEIS

The Pikes Peak Area Council of Governments at its meeting on 12/10/1980 voted to forward the following comment(s) on this proposed project:

Favorable - the project does not appear to conflict with Regional Plans, programs, or objectives.

Unfavorable, for the following reasons:

No Comment

No Action, postponed until the next \_\_\_\_\_ on \_\_\_\_\_

The following comments were made by the PPACG Board:

See attached memo

Copies of the following are attached:  Local Comments

PPACG Staff Comment

Copy sent to State Clearinghouse on December 12, 1980

Please forward a copy of this form and local comments with your application to the funding agency.

15190

III-99

Charles W. Helm  
CHAIRMAN

Donald P. Umh  
1st VICE CHAIRMAN

George James  
2nd VICE CHAIRMAN

William C. Chute  
SECRETARY

Shirley Wadarski  
TREASURER

Roland Gow  
EXECUTIVE DIRECTOR

**PIKES PEAK AREA COUNCIL OF GOVERNMENTS**

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



**A-95 REVIEW SUMMARY**

**Date:** December 2, 1980

**TO:** PPACG

**FROM:** Patricia H. Denham

**SUBJECT:** A-95 Review, PNR # 80-167

**PROJECT TITLE:** CONSOLIDATED SPACE OPERATIONS CENTER/DEIS

**APPLICANT:** Department of the Air Force

**APPLICANT'S ADDRESS:** Office of Secretary

United States Air Force, Washington, D. C.

**GRANT AMOUNT:** Total: N/A

Federal: \_\_\_\_\_; State: \_\_\_\_\_; Local: \_\_\_\_\_; Other: \_\_\_\_\_

**FUNDING AGENCY:** Department of the Air Force

**PROJECT DURATION:** From \_\_\_\_\_ to \_\_\_\_\_

**GEOGRAPHIC AREA COVERED BY THE PROPOSED PROJECT:**

El Paso County

**PROJECT DESCRIPTION:** See attached memo

(OVER)

15190

VI (1)

W. Mohr  
MAN

Donald P. Linn  
1st VICE CHAIRMAN

George James  
2nd VICE CHAIRMAN

William C. Chute  
SECRETARY

Shirley Wodarski  
TREASURER

Roland Gow  
EXECUTIVE DIRECTOR

CONSISTENCY WITH ADOPTED PLANS:

<u>Yes</u>	<u>No</u>	<u>Plan</u>	<u>Date Adopted</u>
<input type="checkbox"/>	<input type="checkbox"/>	Transportation Plan - Long Range Element	September 8, 1971
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Regional Open Space Plan	December 8, 1971
<input type="checkbox"/>	<input type="checkbox"/>	Transportation Plan - Systems Management Element	February 9, 1977
<input type="checkbox"/>	<input checked="" type="checkbox"/>	"208" Areawide Water Quality Management Plan	October 12, 1977
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Regional Development Framework (Land Use Element)	November 9, 1977
<input type="checkbox"/>	<input type="checkbox"/>	Regional Housing Plan	April 12, 1978
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Air Quality Maintenance Plan for the Colorado Springs Urbanized Area	September 13, 1979
<input type="checkbox"/>	<input checked="" type="checkbox"/>	"208" Water Quality Management Plan Update	August 9, 1978
<input type="checkbox"/>	<input type="checkbox"/>	Region IV Criminal Justice Action Plan	Annually
<input type="checkbox"/>	<input type="checkbox"/>	Areawide Agency on Aging Plan	Annually
<input type="checkbox"/>	<input type="checkbox"/>	Regional Development Projections	
<input type="checkbox"/>	<input type="checkbox"/>	Other _____	

LOCAL COMMENTS REQUESTED FROM THE FOLLOWING AGENCY(S)/ORGANIZATION(S):

See attached

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STAFF COMMENTS: See attached

**PIKES PEAK AREA COUNCIL OF GOVERNMENTS**

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



PPACG

December 2, 1980

**MEMORANDUM**

TO: Pikes Peak Area Council of Governments

FROM: Patricia H. Denham *dit*

SUBJECT: A-95 Review, PNR #80-167  
Consolidated Space Operations Center  
Draft Environmental Impact Statement

**Description of Proposed Alternatives**

The proposed Consolidated Space Operations Center (CSOC) is a ground control center that includes a complex of buildings and an antenna field. Initially five antennas would be installed with provisions for additional antennas as yet not identified. Operation of the CSOC would require a combined military and civilian labor force of about 2,000 persons. When dependents are considered, the CSOC population could total approximately 6,100 persons.

The three locations, Peterson AFB/Colorado Springs, Kirtland AFB/Albuquerque, and Malmstrom AFB/Great Falls, were considered as candidate CSOC sites and all meet the basic geographic, technical, support and resource siting criteria. The Colorado Springs location is preferred because of its unique operational advantages. Specifically considered were the effects resulting from geographical proximity of the CSOC with the Space Defense Operations Center (SPADOC).

**Project Description of Selected Alternative**

The Department of the Air Force proposes to locate the Consolidated Space Operations Center (CSOC) in the Peterson Air Force Base/Colorado Springs area.

The Peterson Air Force Base/Colorado Springs area was selected as the prime candidate because of its unique operational advantages which accrue from its proximity to related activities, namely the Space Defense Operations Center (SPADOC) of the North American Air Defense Command at the United States Air Force Cheyenne Mountain Complex. Proximate location of CSOC and SPADOC would provide a foundation for significant, long-term operational efficiencies stemming from convenient face-to-face planning as well as shared

support tasks. In this regard, SPADOC will be able to provide the CSOC with a link into the existing space surveillance and warning structure. The proximate siting of these two functions also offers flexibility to accommodate future, unfolding defense missions in space. The CSOC will require a new technical facility totaling about 370,000 square feet plus 100,000 square feet of support facilities. Construction of CSOC is currently planned to begin during fiscal year 1982 on one of two possible sites in the Colorado Springs, Colorado area.

The Air Force is considering one of two specific sites east of Colorado Springs for the CSOC facility location. Their location is about 10 miles east of the City limits, and 1-2 miles south of Highway 94. The sites under consideration are Sections 24 and 26 of Range 64 West Township 14 South; Section 26 adjoins the east side of Enoch Road and Section 24 is one mile further east at the northeast corner of Section 26. These two sections are portions of a larger block of land which was put under State ownership by the Federal government when Colorado became a State in 1876. The sections are undeveloped and are occasionally used for livestock grazing. Other than three farmhouses on property adjoining the south and west property lines of Section 26, there are no other inhabited dwellings on property adjoining either section of land. A small subdivision called the Rolling Hills Ranch Estates is located northeast of Section 24 and will probably be developed by the respective lot owners at some time in the future.

Several ranches and small farms are the predominant land use in the vicinity. A coal mining operation has recently been approved in the area south of Highway 94 off of Franceville Road (three miles west of the CSOC sites); mining will begin this year.

#### Personnel Phase-In

\*When fully operational in mid calendar year 1985, the CSOC would employ approximately 300 Air Force military personnel, 100 Department of the Air Force civilian personnel, and approximately 1,400 contractor personnel. Operational manpower for CSOC would be phased over a three-year period beginning in fiscal year 1983, as indicated in Table 1. The accompanying base support requirement (for such services as personnel, accounting, civil engineering, etc.), would cause an additional manpower increase of about 120 persons.

\*Corrections suggested by the Air Force: 1,200 contractor personnel and 70-100 persons.

Table 1

CSOC Personnel Phase-In

Personnel Category	Fiscal Year			Total
	1983	1984	1985	
Military: Officers	27	29	72	128
Airmen	51	55	84	190
Total Military	78	84	156	318
Civil Service	11	28	72	111
Contractors	119	337	957	1,413
Base Support	16	34	71	121
TOTAL PERSONNEL	224	483	1,256	1,963

For purposes of determining population-related impacts, the total number of CSOC employees was assumed to be about 2,000. Using a factor of 3.2 persons per household, the CSOC-generated population was therefore 6,100 additional people at each of the three candidate locations.

Environmental Impacts of the CSOC Project

The environmental impacts that are expected to occur with the construction and operation of the CSOC at each of the three candidate locations are not considered to be of significant magnitude. There are essentially four areas of concern that would be affected to varying degrees at each of the three candidate locations. They are:

- ° Air Quality : The CSOC project traffic would add to the degradation of air quality at all three locations. However, the percentage increase in yearly emissions is below 2% in Great Falls and under .5% in Colorado Springs and Albuquerque.
- ° Traffic : CSOC project traffic would add to the existing congestion at base entry gates and on local roads and base interior roads, particularly during rush hour. Because of the singular access road to the Colorado Springs CSOC site, project traffic would be concentrated on a single rural highway. This impact could be mitigated with car/vanpooling and staggered work hours.

(OVER)

- ° Electromagnetic Radiation : Electromagnetic radiation from the CSOC antennas is not anticipated to be hazardous to occupational personnel at ground level. Electro-explosive devices carried on aircraft could be activated, however. For this reason aircraft should be restricted inside a 1,000 foot radius of the antenna field. Under normal conditions there are no aircraft flying in the immediate vicinity of the CSOC site at either Colorado Springs or Albuquerque. At Malmstrom AFB considerable flight activity occurs in close proximity to the CSOC site due to the nearby runway.
- ° Public Schools : Public school enrollment has declined over the past few years at each of the three locations. The CSOC project could, depending on the number of new families moving into the area, require the re-opening of school facilities (classrooms) that have been closed during the past few years. In the Great Falls location, it may be necessary to re-open an entire school in the event the majority of the CSOC employees were new to the Great Falls area. Construction of new facilities would not be required as a result of CSOC.

In addition to the above impacts which are common to varying degrees at all three candidate locations, there are several considerations that are unique to one or two of the candidate sites. These are:

- ° Growth Inducement : The CSOC location 10 miles east of the urbanized area of Colorado Springs could encourage commercial development along Highway 94. Such development would be outside the areas of current growth patterns.
- ° Visual Intrusion : Both the Colorado Springs and Great Falls sites are such that portions of the CSOC would be visible from adjoining public roads, highways and scattered homes. This impact could be positive or negative depending on one's personal preferences, but would tend to be considered as an adverse impact by those who live in the immediate area.

#### Mitigation Measures

Mitigation measures that will be incorporated in the CSOC to alleviate adverse impacts are as follows:

- Staggered work hours to minimize local traffic congestion
- Car and vanpooling will be encouraged to reduce air pollution, traffic congestion and gasoline consumption
- Landscaping will be used to minimize visual obtrusion of the CSOC
- Field survey measurements will be conducted after antenna installation to identify specific areas, if any, where prohibited or restricted access is required due to electromagnetic radiation
- Air traffic will be restricted within a 1,000 foot radius of the antenna field to avoid accidental activation of electro-explosive devices.

Long-Term Benefits of the CSOC Project

The CSOC project would generate a positive influence on the local economy at each of the three candidate locations. In each area local businesses would be stimulated and unemployment would probably tend to decrease. The public school districts would benefit from the added Federal funds generated by students of the CSOC employees.

From a National standpoint, the CSOC would enhance the National defense posture of the United States through its ability to protect National security data, respond to National defense priorities, and retain mission authority over military Space Shuttle missions.

(OVER)

Local Comments Requested from the Following Agency(s)/Organizations

Agency(s)/Person(s)	Comments Received	
	Favorable	Unfavorable
1. Director of Public Works, City of Colorado Springs	X	
2. Congressmen Kogovsek	X	
3. Cherokee Water District	X	
4. Colorado Division of Highways	X	
5. Intergovernmental Relations Div., City of Colorado Springs	X	
6. Widefield School District #3	No comment	
7. Colorado Springs School District #11	X	
8. El Paso County Department of Transportation	X	
9. Falcon School District #49	X, School District passed bond issue to allow growth of 700 students	
10. Honorable W. H. Becker	X, Suggested we request assistance from Senators Armstrong, Hart and Congressman Kramer	
11. Chamber of Commerce, Local Industry Committee	X	
12. Pikes Peak Water Company	X, Can provide CSOC with potable water	
13. Elicott School District #22	X, Comments attached	
14. Congressman Kramer	NCR	
15. Home Builders Association	NCR	
16. Aiken Audubon Society	NCR	
17. Sierra Club	NCR	
18. City Planning Department	NCR	
19. Mountain View Electric Assn.	NCR	
20. County Land Use Department	X, Comments attached	

Staff CommentsTransportation Impacts

Page III-7, paragraph 1 - No funds have been committed or programmed for construction of Powers Boulevard, but it is not unreasonable to expect substantial work on the project during the 1980-1990 period. The major bypass route about four miles west of Enoch Road is Marksheffel Road - plans for reconstructing this road to freeway standards have been dropped due to financial infeasibility.

99

Page IV-1, paragraphs 3 and 4 - The number of vehicle trips associated with swing shift and night shift workers appears to be underestimated by a factor of 2, based on trip generation rates assumed. This would not greatly affect conclusions drawn from traffic analyses, however.

100

Page IV-2, paragraph 3 - The one-direction peak hour volumes cited for Peterson Boulevard (4,100 vehicles per hour) are extremely high, and would imply severe traffic congestion. Are these volumes actually spread over a two-hour peak period in both the morning and afternoon? Assuming the report gives a two-hour rather than one-hour peak flow period, problems would be expected at the confluence of U.S. 24, S.H. 91, and Peterson Boulevard. CSOC facility planning should include specific recommendations for accommodating projected traffic flows at the confluence.

101

#### Socioeconomic Impacts

Page II-9, Housing, Civilian - There are enough vacant housing units as of January 1, 1980 (4,340) to house all projected CSOC personnel (1,963) and still leave a vacancy rate of 2.1%, (see Table 2). With a phase-in of personnel over a three-year period, we would expect no appreciable decline in vacancies. The housing market is presently in balance. The total vacancy rate is neither too high nor too low (3.9%). The current level of housing construction (about 4,000 units a year) is well below the 10,000 units per year constructed in 1972. The housing construction industry is not at capacity according to today's building rates.

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Table 2  
OCCUPIED HOUSING STOCK  
El Paso County, January, 1980

	Total Stock	Vacant Stock	Percent Vacant	Occupied Stock
Single Family	69,630	1,740	2.5	67,890
Multi-Family	37,470	2,540	6.8	34,930
Mobile Homes	5,010	60	1.2	4,950
<b>TOTAL</b>	<b>112,110</b>	<b>4,340</b>	<b>3.9</b>	<b>107,770</b>

SOURCE: PPACG estimates

Calculations: 4,340 vacant units  
~~-1,963~~ CSOC personnel  
~~2,377~~ vacant units based on assumption that all CSOC personnel came in January 1, 1980

~~2,377~~ = 2.1% vacancy rate based on assumption that all CSOC personnel came in on January 1, 1980

(OVER)

Air Quality Impacts

Page III-7, paragraph 1 - The coal mining operation south of Highway 94 on Franceville Road will impact particulate pollution. At full operating capacity, 150 loaded trucks per day will enter the highway at Franceville Road heading west to Colorado Springs. To mitigate visual effects and reentrained dust these trucks should be covered. If possible, El Paso County should require covering of the trucks as a condition to operate.

103

Page III-12, #5 - The State of Colorado has adopted Senate Bill #52, Automotive Inspection and Maintenance. A copy will be forwarded with local comments.

104

Page IV-7, paragraph 2 - To mitigate impact of motor vehicle emissions as a result of traffic related to the CSOC operations, the employer should assist and encourage ridesharing.

105

Page IV-18, paragraph 2 - Strongly support control of dust from the unpaved road.

Water Quality Impacts

Page III-16, paragraph 3 - As stated in the DEIS, an amendment to Project Aquarius is required prior to certification of the treatment plant (i.e., issuance of a N.P.D.E.S effluent discharge permit). Project Aquarius is scheduled for an update in 1981, therefore the proposed treatment plant can be incorporated into the plan.

Electromagnetic Radiation Impacts

Page IV-21, paragraph 7 - The subject of electromagnetic radiation (EMR) hazard has been receiving increased public attention. This is particularly the case when radiation extends to property outside the controlled facilities boundaries. The communication antennas associated with the CSOC facility produce ground level power densities (both inside and outside the fenced CSOC area) that are considerably below those considered hazardous on the basis of current state-of-knowledge.

Based on review of the DEIS the Department of the Air Force has recommended mitigations to reduce the impact of electromagnetic radiations to personnel at the site and surrounding land uses. In addition, they recommended that aircraft be restricted from within 1,000 feet of the CSOC facility because of the S-Band and the Electro-explosive Device Safety (EED) Standards. According to projections, no single antenna or combination of antennas would be capable of producing ground level power densities that exceed EED criteria.

Consistency with Regional Plans and Programs

The proposed project is inconsistent with local land use policies, plans and controls for the following reasons:

106

Development Framework for the Pikes Peak Region

The framework document emphasizes the need to pursue a combination of both selective infilling of vacant developable land within the City limits and selective annexation of land that is a logical extension of existing development. The proposed CSOC facility is compatible with the adopted Regional Development Framework. The Development Framework provides the flexibility for unique siting requirements for activities such as CSOC. Large scale commercial, industrial and residential development in the vicinity of the CSOC facility would not be compatible with adopted regional policy toward development.

107

City of Colorado Springs Policy Governing Development (i.e., infilling)

"The City should consider the possibility of providing full urban services to lands within the Planning Area (essentially confined to the urban area) with the exceptions of 1) existing contractual commitments for utilities, 2) airport development, or 3) region-wide programs such as economic development for future wastewater treatment plan. Within the Planning Area services should only be provided for developments which are adjacent to existing developed areas, consistent with open space and all other adopted land development policies."

El Paso County Land Development Code

"It is the policy of the County to encourage development which utilizes existing services and facilities without overburdening such facilities and services, or resulting in the need to provide additional services and facilities."

208 Areawide Water Quality Management Plan

Proposed treatment facility not included in Project Aquarius five year treatment plant needs.

Air Quality Maintenance Plan for the Colorado Springs Urbanized Area

Proposed project could increase motor vehicle emission in the Region by .2%, this increase may require the City of Colorado Springs and El Paso County to adopt additional transportation control measures. In addition, impacts (emissions) from the project will be incorporated in the 1982 SIP revision.

108

Staff Recommendations

1. Local school districts and the economy will benefit from the project. School districts will receive both State and Federal ADA (Average Daily Attendance) funds. All of the projected 2,160 CSOC students would generate \$444,868 (based on \$212 per student) in Federal ADA money. However, the Ellicott School District will receive the greatest impact. Percentage wise, if 10% of the projected 2,160 students or 216 students (representing about 100 families) their enrollment would increase by 150 plus percent. 109
2. Revenue will be generated primarily in the form of various taxes such as gasoline, cigarette, sales taxes and the State income tax.
3. County zoning on land along Highway 94 and in the immediate vicinity of the CSOC should be implemented to provide a mechanism to protect the integrity of both the CSOC facility and the established farms in the area, and the existing rural environment.
4. Revisions or amendments to City and County policies that discourage encroachment near the CSOC facility should therefore be implemented through the zoning mechanism.
5. If possible, plans should be formulated to increase Highway 94 from a 2-lane to 4-lane highway or to provide turnouts or spotwidening. Between the hours of 7:30 a.m. to 8:30 a.m. and 3:00 p.m. to 4:00 p.m. the Ellicott School District operates one or more buses on Highway 94 between mile marker 1 and 17, these buses will stop all traffic at various loading and unloading points. 110
6. To mitigate the air quality impact, we recommend the encouragement of a vanpool program or shuttle bus system perhaps utilizing Peterson Field as a park and ride facility. If implemented this would be in compliance with the General Services Administration's temporary regulations published October 17, 1980 in the Federal Register, pages 68936 and 68937. 111
7. Local governments should work closely with Department of the Air Force personnel and their consultant to ensure that policies, plans and programs adequately protect and enhance the environment, economy and welfare of the Region.
8. If possible, the local task force could be re-established to ensure that if the Colorado Springs site is funded, local coordination can occur as "expeditiously as possible".
9. PPACG should adopt a resolution expressing support for the location, construction and operations of the CSOC within the Pikes Peak Region.

CSOC/DETS DISTRIBUTION LIST

Honorable W.H. Becker  
1148 Bellaire Drive  
Colo. Spgs., CO 80909

Col. Bob Daniel, Ret.  
Sierra Club  
1007 North Union  
Colo. Spgs., CO 80909

Rodney Preisser, Pres.  
Pikes Peak Water Company  
4463 Whispering Circle  
Colo. Spgs., CO 80917

Mr. John A. Covert  
Intergovernmental Relations  
Division  
City Mail #100

Mr. Guy Wallace, Chairman  
Colo. Spgs. Planning Comm.  
P.O. Box 548  
Colo. Spgs., CO 80901

Dr. Dwight M. Davis, Super.  
Colo. Spgs. School Dist. #11  
1115 North El Paso  
Colo. Spgs., CO 80903

Mr. Donald Tolbert, Super.  
Elton School District #49  
R. 1  
Elton, CO 80831

Mr. Bud Owsley, Director  
Colo. Spgs. Planning Dept.  
City Mail #305

Dr. James B. Knox, Super.  
Widefield School Dist. #3  
1820 Main Street  
Security, CO 80911

Deputy for Environ. & Safety  
Office of the Sect. of the  
Air Force (SAF/MQ)  
Washington, D.C. 20330

Mr. Dewitt Miller, Dir.  
Public Works Dept.  
City Mail #340

Representative Kogovsek  
60 S. Circle Drive  
Colorado Spgs., CO 80910

Mt. View Electric Assoc.  
3524 North Tejon  
Colo. Spgs., CO 80907

Representative Kramer  
120 North Union  
Colorado Spgs., CO 80909

William T. Wildman, Dir.  
El Paso County Land Use  
27 East Vermijo  
Colo. Spgs., CO 80903

Mr. Allan W. Kieven, Pres.  
Home Builders Assoc.  
413 Potter Drive  
Colo. Spgs., CO 80909

State of Colorado  
Div. of Hwy., 18 E. Arvada  
P.O. Box 159  
Colo. Spgs., CO 80901  
Attn: Vic Anders, Res. Eng.

Mr. Dan Martinez  
Local Industry Subcom.  
416. Spgs. Chamber of Com.  
9 Chase Stone Center  
Colo. Spgs., CO 80903

El Paso Co. Dept. of Trans.  
3120 Century Street  
Colo. Spgs., CO 80907  
Attn: George Madrid, Eng. Ad.

Mr. Helen Charlton  
Ken Autobon Society  
113 Wood Avenue  
Colo. Spgs., CO 80903

Cherokee Water District  
702 Western Dr., P.O. Box 9908  
Colo. Spgs., CO 80932  
Attn: F. Stuart Loosley, Man.

**PIKES PEAK AREA COUNCIL OF GOVERNMENTS**

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



PPACG

December 11, 1980

MEMORANDUM

TO: A-95 File, PNR #80-167

FROM: Peterson AFB, Jack Tuckston per Telephone Message, December 9, 1980

SUBJECT: Comments on the Consolidated Space Operations Center/DEIS

Comments received are in reference to a PPACG memo dated December 2, 1980 to the Pikes Peak Area Council of Governments.

Page 2 - typographical error - 1976 should read 1876.

Page 2 - Personnel Phase-In - General comment that "numbers are still being juggled by contractors". Suggested the following corrections; 1,200 contractor personnel rather than 1,400, and 80-100 additional manpower increases rather than 120 persons.

Page 7 - Stated that these paragraphs do not exist (pages IX-1 paragraph 2 and 4....) this is a typographical error, it should read IV-1, paragraph 2 and 4....

Page 8 - Air Quality Impacts - Page III-7, Paragraph 1, Questioned relevance to the CSOC facility.

Page 8 - Page IV-7, paragraph 2, "Can't mandate that employee carpool". PPACG's intent is to require employer to assist with and encourage ridesharing.

Page 8 - Electromagnetic Radiation Impacts - Page IV-21, paragraph 7, eliminate the word would from the fifth line, third sentence.

Page 10- #3 - add the following wording, "and the existing rural environment".

Page 10- #5 - "Concur with use of spot widening or turnouts".

No additional concerns were expressed.

kb

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80 PPACG Identifier 80-167

To Stanton L. Roberts, Superintendent

Ellicott School District #22

R.R. 2

Gaithersburg, MD 20808

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes No There is a need for this project.

Yes No This project is the most effective and efficient way to meet the need.

Yes No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments The above check list is not applicable to be

answered by a school district with respect to a federal project.

But there are several additional environmental impact points that  
have not been recognized. In background information an  
mailed.

For what they are worth I shall list a number of comments by  
category.

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(continue comments on back of this form, if necessary)

15190

III-114

Environmental/Socio-economic Attribute

Environmental Consequences

Public School

The Board of Education and Administration would be most happy to cooperate with local, state and federal people and agencies who are or will be involved with the proposed space center.

CSOC—the facility proper, as proposed will lie wholly in Ellicott School District #22.

112

Many workers will prefer to live as close to work as possible. Many others will prefer either to live on a small acreage or rural setting. The area encompassed by Ellicott School District fits both these preferences.

Any new residential housing lieing East of Peterson Field and within one mile North or South of Highway 94 will be in Ellicott School District. At a point 5 miles East of Peterson Field, District #22 begins to widen first to the South then to the North.

113

Percentage wise if we were to receive only 10% of the 2160 anticipated students, or 216 students representing about 100 families our enrollment would increase by one hundred fifty plus per cent. An impact would be greater than that of any School District.

Federal Impact Monies, PL874, are now being reduced. The major school funding will come from state and local sources.

Traffic

Between the hours of 7:30 to 8:30 A.M. and 3:00 to 4:00 P.M. Ellicott does operate one or more buses on Highway 94 between mile marker 1 and 17. As Highway 94 is only a two lane highway these buses will stop all traffic at various loading or unloading points.

114

Highway 94 in its present width and state of repair is now barely adequate to handle the current commuter traffic from the Rush and Ellicott area, plus the other business travel.

Highway 94 traffic would be increased by business and tourist traffic as well as CSOC employees.

Immediate plans should be formulated to "4 lane" Highway 94 East to the CSOC location.

RECEIVED NOV 7 1980

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To Mr. Dewitt Miller

Director of Public Works, City of Colorado Springs

107 North Nevada

Colorado Springs, CO 80903

(A copy of this Report was previously forwarded to your office.)

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No

This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No

There is a need for this project.

Yes  No

This project is the most effective and efficient way to meet the need.

Yes  No

There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments

*It appears as though all concerns, which one might have, are addressed.*

*Patricia Denham*

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(continue comments on back of this form, if necessary)  
15190

no later than November 28, 1980

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To Rodney Preisser, President

Pikes Peak Water Company

4463 Whispering Circle

Colorado Springs, CO 80917

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No There is a need for this project.

Yes  No This project is the most effective and efficient way to meet the need.

Yes  No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments Comments concerning the Pikes Peak Water Co. were accurate in the draft environmental impact statement. Our company is in a position to provide the proposed C.S.O.C. with potable water for it's needs.

(continue comments on back of this form, if necessary)

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PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To Congressman Kogovsek

2860 South Circle Drive

Colorado Springs, CO 80910

(A copy of this Report was previously forwarded to your office.)

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No There is a need for this project.

Yes  No This project is the most effective and efficient way to meet the need.

Yes  No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments \_\_\_\_\_

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no later than November 28, 1980

III-118

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To Cherokee Water District Attn: E. Stuart Loosley, Manager

702 Western Drive

P.O. Box 9908

Colorado Springs, CO 80932

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No There is a need for this project.

Yes  No This project is the most effective and efficient way to meet the need.

Yes  No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments

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(continue comments on back of this form, if necessary)

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no later than November 28, 1980

III-119

**PIKES PEAK AREA COUNCIL OF GOVERNMENTS**

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



**REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW**

Date 11/7/80 PPACG Identifier 80-167

To State of Colorado Attn: Vic Anders, Resident Engineer  
Division of Highways, 18 East Arvada  
P.O. Box 159  
Colorado Springs, CO 80901

(A copy of this Report was previously forwarded to your office.)  
From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact  
Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.  
 Yes  No There is a need for this project.  
 Yes  No This project is the most effective and efficient way to meet the need.  
 Yes  No There is evidence that this project duplicates an existing program.  
... No comments at this time

Additional comments No Comments

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15190

**PIKES PEAK AREA COUNCIL OF GOVERNMENTS**

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



**REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW**

Date 11/7/80

PPACG Identifier

80-167

To Mr. John A. Covert

Intergovernmental Relations Division

City of Colorado Springs, 107 North Nevada

Colorado Springs, CO 80903

(A copy of this Report was previously forwarded to your office.)

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No There is a need for this project.

Yes  No This project is the most effective and efficient way to meet the need.

Yes  No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments The City of Colorado Springs encourages a favorable review.

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15190

November 28, 1980

III-121

**PIKES PEAK AREA COUNCIL OF GOVERNMENTS**

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

**REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW**

Date 11/7/80

PPACG Identifier 80-167

To Dr. James B. Knox, Superintendent  
Widefield School District #3  
1820 Main Street  
Security, CO 80911

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact  
Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No There is a need for this project.

Yes  No This project is the most effective and efficient way to meet the need.

Yes  No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments \_\_\_\_\_

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15190

November 28, 1980

III-122

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To Dr. Dwight M. Davis, Superintendent

Colorado Springs School District #11

1115 North El Paso

Colorado Springs, CO 80903

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No There is a need for this project.

Yes  No This project is the most effective and efficient way to meet the need.

Yes  No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments School District 11, as indicated in your Abstract of CSOC, could adequately handle enrollments projected from this installation. We would be delighted to have the proposed Consolidated Space Operations Center located in our area.

(continue comments on back of this form, if necessary)

15190

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III-123

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

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REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To El Paso County Department of Transportation

3120 Century Street

Colorado Springs, CO 80907

Attn: George E. Madril, Jr., Engineering Administrator

(A copy of this Report was previously forwarded to your office.)

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No There is a need for this project.

Yes  No This project is the most effective and efficient way to meet the need.

Yes  No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments The City is not in a satisfactory time

I am in the alternative for this project

George E. Madril Jr.

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YOUR RECORDS AND RETURN  
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(continue comments on back of this form, if necessary)

15190

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PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To Dr. Donald Tolbert, Superintendent

Falcon School District #49

R.R. 1

Peyton, CO 80831

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes  No This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes  No There is a need for this project.

Yes  No This project is the most effective and efficient way to meet the need.

Yes  No There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments School passed bond issue. Completion of project will allow growth of 700 students. It is not anticipated that project would impact school district to the point of creating housing problems for students. Circumstances above are not within our

(continue comments on back of this form, if necessary)

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III-125

15190

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080

PPACG

REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To Honorable W.H. Becker

1448 Bellaire Drive

Colorado Springs, CO 80909

(A copy of this Report was previously forwarded to your office.)

From Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes        No        This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes        No        There is a need for this project.

Yes        No        This project is the most effective and efficient way to meet the need.

Yes        No        There is evidence that this project duplicates an existing program.

No comments at this time.

Additional comments

*It appears this project is becoming "very" political since Sen. Hart's position has apparently become less enthusiastic. We urge, therefore, your proper assistance from Sen. Cranston, Long, Hruska, Hargrave, & Brown.*

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15190

November 28, 1980

III-126

PIKES PEAK AREA COUNCIL OF GOVERNMENTS

27 E. Vermijo, Colorado Springs, Colorado 80903 (303) 471-7080



REQUEST FOR LOCAL COMMENTS FOR CLEARINGHOUSE REVIEW

Date 11/7/80

PPACG Identifier 80-167

To XXXXXXXXXXXXXX Mr. Mike Madigan

Local Industry Subcommittee

Colorado Springs Chamber of Commerce, 100 Chase Stone Center

Colorado Springs, CO 80903

From (A copy of this Report was previously forwarded to your office.)

Patricia Denham, Environmental Coordinator

Project Title Consolidated Space Operations Center, Draft Environmental Impact

Statement

Applicant United States Government, Department of the Air Force

To help in the Clearinghouse review process, the PPACG is requesting your agency or jurisdiction's comments on this proposed project. A description of the project is attached. Please answer the following questions, if applicable. Make any additional comments in the space provided.

Yes        No        This project is consistent with the goals, objectives, plans and programs of this agency or jurisdiction.

Yes        No        There is a need for this project.

Yes        No        This project is the most effective and efficient way to meet the need.

Yes  No        There is evidence that this project duplicates an existing program.

       No comments at this time.

Additional comments     No additional comment.    

*Mike Madigan  
11/7/80*

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(continue comments on back of this form, if necessary)

15190

III-127

no later than November 28, 1980

RESPONSE TO COMMENTS  
FROM LOCAL AGENCIES

El Paso County Land Use Department, Colorado

90. Based on a total potable water supply of 96,900 acre-feet, the CSOC population could demand (under the worst case situation where all CSOC employees are new to the area) about 0.8% of this supply. This is equivalent to 2.4% of the total presently undeveloped known sources of potable water.

91. The comment is correct in stating that the service population is more correctly 200,000 persons rather than 76,000. This means that the associated CSOC population under the worst case situation would represent approximately 3% of the new service demand. The power company has predicted that, based on a 3% annual growth rate (equivalent to an additional 76,000 persons by 1988), a new powerplant would be needed.

It should be noted that the electrical power demand factor presented in Table 27 of the Draft EIS for "CSOC Households" was in error. The correct factor should be 650 kW-hr/DU/month for a total demand of 15.3 Mw-hr/yr. This correction does not alter the conclusion that adequate power is available for servicing the CSOC population since the analysis was based on population increase rather than on specific utility consumption rates.

92. The recently-approved plan that includes improvements to Marksheffel Road, re-alignment of Powers Boulevard, and a new east-west road that could eventually connect to Drennan Road east of Jimmy Camp Creek, could enhance vehicular access by providing a southerly access to the CSOC site.

93. The signalization improvement project programmed for the intersection of Highway 94 and Peterson Road should considerably relieve traffic congestion during peak am and pm base hours. This could reduce the potential need for an additional lane for either northbound or westbound traffic that might occur as a result of CSOC traffic. To the extent that car or van pooling and/or staggered shift hours at the CSOC facility to avoid Peterson peak traffic periods are incorporated, traffic congestion at the Highway 94/Peterson Road intersection will be further mitigated. (See also the response to Comment No. 101.)

94. The information on school capacities and enrollments was based on data that was available at the time the Draft EIS was written. Data contained in this comment reflects more recent enrollment statistics which result in a 1980 under-capacity of 15,328 instead of the earlier-reported 12,017 figure. (Refer to Table 39 of the Draft EIS.) This latter data indicates that Districts 2 and 49 are no longer "at capacity" and hence would be able to accommodate a portion of the CSOC students.

95. The 1980 publication of Housing Market Analysis, Pikes Peak Region contains housing information which is comparable to that contained in the Draft EIS except in the area of "projected housing stock". The total housing stock cited in the Draft EIS was abstracted from the 1979 Housing Assistance Plan provided by the Colorado Springs Community Development Department. Using the 1980 housing data reported in the latest publication of Housing Market Analysis, Pikes Peak Region (1980), 112,110 housing units are presently existing and a need for 17,600 to 29,000 additional units is projected by 1985. This estimate includes projected CSOC housing demands.

95. Continued . . .

The vacancy rates reported in the Draft EIS were also obtained from the 1979 Housing Assistance Plan, and these do not markedly differ from those cited in the 1980 Housing Market Analysis. The average monthly rental rate for a 2-bedroom apartment is cited as \$230 per month in the Draft EIS, not \$300 per month as noted in the comment. This average monthly rate is comparable to the \$228 figure included in the 1980 Housing Market Analysis.

Based on the projected 1985 housing stock as noted in the comment, it is unlikely that the CSOC population would cause the overall vacancy rate to drop below acceptable levels which are defined for the Colorado Springs area as 2% for single-family units, 6% for multi-family units, and 2% for mobile homes. These vacancy rates are defined in the 1980 Housing Market Analysis.

96. Although the latest school enrollment/capacity figures have been amended (as noted in Comment No. 94), this is not expected to materially alter the problem in certain neighborhoods where rapid growth has outpaced school construction and crowded classrooms exist.

97. As described in the Draft EIS on pages IV-56 and IV-57, and as further confirmed by comments received from the Pikes Peak Area Council of Governments (PPACG), refer to page III-110 of this document), the proposed CSOC facility is located outside the heretofore planned area of growth for the Colorado Springs metropolitan area. However, as further noted by PPACG, "The proposed CSOC facility could be found compatible with the adopted Regional Development Framework which provides flexibility for unique siting requirements for activities such as CSOC".

In recent months the eastern part of the county (between Ellicott and Colorado Springs) has been the subject of increased interest in development on the part of several private parties owning some 30,000 acres of land in this area. Because of this recent activity, the County Land Use Department has been involved in preliminary long-range planning for the unincorporated area east of Colorado Springs, in the vicinity of Highway 94 and including the area proposed for the CSOC facility. The County Land Use Department has also budgeted funds for updating an earlier zoning study of this same area. In view of this recent activity, it appears that a General Plan and implementing zoning for this area may be imminent. It is important to recognize that the Department of the Air Force is supportive of local governmental actions aimed towards land use planning and zoning that protects the integrity of existing land uses as well as that of the CSOC facility.

98. The response to Comment No. 97 above more accurately reflects the present situation with respect to the status of plans, policies and controls in the Colorado Springs area. The response to Comment No. 69 further elaborates on subdivision/zoning controls.

Pikes Peak Area Council of Governments, Colorado

99. It is so noted that plans for reconstructing Marksheffel Road to freeway standards have been dropped due to financial infeasibility. However, as noted in Comment No. 92 from the El Paso County Land Use Department, "The County Planning Commission has endorsed a road system plan . . . including the Marksheffel road corridor." The County has plans to upgrade Marksheffel road in the near future to a Minor Arterial; plans are to ultimately upgrade it to the status of a Major Arterial Highway.

100. The number of vehicle trips associated with swing and night shift workers was in error in the Draft EIS (page IV-1). Instead of 200 trips inbound and outbound, 405 trips each way are anticipated. This correction does not affect the traffic analysis nor the conclusions reached in the Draft EIS.

101. The peak hour traffic volume is approximately 2000 vehicles traveling in one direction. Traffic congestion presently occurs at the confluence of Highway 94 and Peterson Road during the 7-8 am and 4-5 pm hours; the signalization improvement project planned for Peterson Road (refer to Comment No. 93) should relieve this congestion. To the extent that car or van pooling and/or staggered shift hours at the CSOC are implemented, traffic congestion at the Highway 94/Peterson Road intersection would be mitigated.

102. 1980 housing statistics contained in the Housing Market Analysis, Pikes Peak Region result in a projected housing stock in 1985 of just under 130,000 homes (using the Low Series projection). Based on this data, rather than on the figures used in the Draft EIS which were obtained from the Housing Assistance Plan, the projected vacancy rate in 1985 would drop from about 4% to 2.5%. This is under the worst case assumption that all 1,963 employees would be new residents of the Colorado Springs area.

103. This issue is not within the scope of the CSOC project.

104. The adoption of Senate Bill No. 52, Automotive Inspection and Maintenance, is so noted.

105. A temporary regulation entitled "Federal Facility Ridesharing Program" (Executive Order 12191) is presently in effect that requires federal agencies to promote ridesharing and to report accomplishments in this effort by June 1, 1981. The intent of this regulation is to promote ridesharing as a means of conserving fuel, reducing pollutants, reducing traffic congestion, and providing an economical way for employees to commute to work. This regulation expires June 30, 1981. The regulation has been implemented by Air Force Energy Policy Program Memo 80-4, which among other things, sets a goal of 35% participation in ridesharing. A ridesharing program at CSOC will be implemented consistent with these directives.

106. See response to Comment No. 97.

107. See response to Comment No. 97.

108. See response to Comment No. 51 (page III-36).

109. See response to Comment No. 112.

110. The existence of school buses on Highway 94 was not known during the preparation of the Draft EIS and is justifiably a concern that should be evaluated. The following paragraphs discuss this issue:

The Ellicott Public School District operates three 65-seat school buses that make a total of 14 stops between Marksheffel Road and Ellicott in the morning hours between 7:30 and 8:30 am (heading east) and between 3:00 and 4:00 pm (heading west). The direction which the buses travel coincides with the CSOC traffic flow. During the interval when a bus is stopped to pick up or discharge students, traffic in both directions is required to stop. In the morning hours, therefore, CSOC employees would encounter stop-and-go traffic on Highway 94 during this time period. The additional traffic generated by CSOC employees would also increase the exposure of school buses and their occupants to potential traffic accidents. (Potentially 1,215 CSOC vehicles could be added to Highway 94 during the peak am and pm hours. This figure is approximately double the reported average daily traffic currently on Highway 94.)

CSOC employees could not avoid conflicting with school bus traffic simply by taking an alternate route to work since the only direct access to the CSOC facility from Colorado Springs is by way of Highway 94. The County does have plans, however, to connect Drennan Road on the south with a new east-west road leading into Colorado Springs; the timing of this connection will be highly dependent upon the level of demand for this route generated by the CSOC project.

The State Department of Highways is presently improving Highway 94 between Ellicott and Colorado Springs city limits. One of the improvements includes the paving of 8-foot shoulders on both sides of the road to provide additional space for emergency equipment, stalled vehicles, etc. The paved shoulders could also serve as acceleration/deceleration lanes for the school buses, thereby providing a limited opportunity for traffic to pass and avoid the stop-and-go situation.

111. Refer to response to Comment No. 105 for information with respect to the Federal Facility Ridesharing Program. A shuttle bus system utilizing Peterson AFB as a park and ride facility has not been included as a mitigation measure. If considered in the future, a detailed traffic analysis would be required to determine the proper location of the park and ride facility to avoid adding to congestion at entry points on the base, particularly at the Highway 94/Peterson Road intersection.

112. It is impossible to determine the number of CSOC employees who would live in the Ellicott school district. It is presumed that all CSOC employees would locate where there is available housing and adequate school facilities. It should be recognized that the CSOC project differs from the typical 'development' project in that the CSOC population would be distributed throughout the area rather than confined to one given residential development.

113. It is presumed that CSOC employees would not elect to live in the Ellicott School District if school facilities are not able to accept them without placing their children on double sessions or subjecting them to overcrowded conditions. This is particularly thought to be the case because of the wide variety of options available for housing in Colorado Springs. (Refer also to response to Comment No. 112 above.)

114. Refer to responses to Comments Nos. 110 and 111. Rush hour traffic from the Rush and Ellicott area (to and from Colorado Springs) is included in the traffic counts cited in the Draft EIS on page III-6. (It should also be noted that rush hour traffic from Rush and Ellicott would be traveling in the opposite direction of the CSOC traffic.) It is acknowledged, however, that although Highway 94 is far from capacity, a two-lane road (one lane in each direction) has inherent safety problems. To some degree this is being alleviated by the addition of paved shoulders on both sides of the highway.

O R G A N I Z A T I O N S

Comments and Responses

Comments: No. 115  
(Page III-134)

Responses: Page III-135



DEC 5 1980  
DIV. OF PLANNING

COLORADO  
HISTORICAL  
SOCIETY

The Colorado Heritage Center 1300 Broadway Denver, Colorado 80203  
December 4, 1980

Mr. Stephen O. Ellis, Principal Planner  
A-95 Clearinghouse  
420 State Centennial Building  
1313 Sherman Street  
Denver, CO 80203

Dear Mr. Ellis:

This office has reviewed the draft environmental impact statement for the Consolidated Space Operations Center, #80-156.

Under the National Environmental Policy Act, the Air Force is required to comply with the federal preservation laws, the National Historic Preservation Act of 1966 as amended, and Executive Order 11593. The procedures to implement this law and supporting executive order are set forth in Federal Regulation 36 CFR 800.

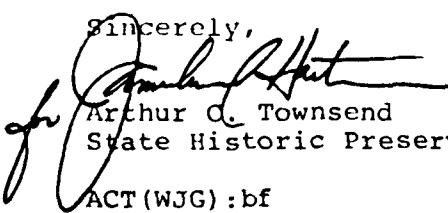
These regulations require the Air Force to:

1. Identify at the earliest stages of planning cultural resources that are eligible to the National Register of Historic Places. This investigation includes a cultural resource survey conducted by qualified personnel.
2. Determine the effect of the proposed project on resources determined eligible.
3. Develop plans to avoid or mitigate the adverse effect on eligible resources.

115

We look forward to working with the Air Force to insure adequate consideration of cultural resources. If this office can be of further assistance, please contact the Compliance Division at 849-3392.

Sincerely,

  
Arthur D. Townsend  
State Historic Preservation Officer

ACT(WJG):bf

RESPONSE TO COMMENT  
FROM ORGANIZATIONS

Colorado Historical Society

115. It is so acknowledged that Executive Order 11593 must be complied with by the Air Force in the implementation of the CSOC project.

I N D I V I D U A L S

Comments and Responses

Comments: No. 116 through No. 118  
(Pages III-137 through III-140)

Responses: Page III-141

NOTE: This is a typed duplicate of  
Mr. Ranieri's letter.

Dear Senator:

The article at inclosure 1 (Independent Record, Helena, MT) reference the space center being considered for Great Falls, MT has me disturbed as a concerned citizen in the state of Montana. You as one of our spokesmen in Washington D.C. need to be made aware of possible mis-statement of facts.

The following is presented for your review and hopefully you will also be concerned and speak up for the great State of Montana.

1st Cost of Living Index:

Colorado Springs	94.5
Great Falls	94.9

If Great Falls is considered higher cost of living area, why is the TDY rate higher in Colorado Springs? It is \$63.00 per day in Colorado Springs and \$50.00 per day in Great Falls. (See inclosure 2)

116

2nd Average Monthly Rent:

Colorado Springs	\$300.00
Great Falls	\$308.00

If the monthly rate for rent is larger in Great Falls, why is the Variable Housing Allowance (VHA) recently approved (inclosure 3) more for Colorado Springs than it is for Great Falls.

117

3rd Available Housing Units:

Colorado Springs	3630 units
Great Falls	2722 units

With the recent announced closing of the Anaconda Copper Mining Company and the upcoming closing of the NORAD facility at Malmstrom AFB, there will be many more units than the 2722 units identified as available in Great Falls. Great Falls will face a serious economic situation in Mid-1981.

118

4th Land and Buildings:

Great Falls-The land is available, there is no cost; there are some well constructed buildings (NORAD) that can be used. There are excellent on base facilities, new base exchange, new education center, new or remodeled on base living quarters and soon to be constructed coal fired central heating plant.

Colorado Springs-The land will have to be purchased, there are no buildings available.

It appears to me and a large number of citizens in Montana that Great Falls is the only way to go. Tdy costs, variable housing allowance is less, there will be more housing units available, there is no cost for land, there are buildings that can be used and excellent on base housing and facilities. The need to practice supply economy by all federal employees is desperetly needed.

Great Falls will become a depressed areas. These Federal Dollars will be well spent on Great Falls to prevent this.

LARRY RANIERI  
1828 Apt. 4 Waukesha  
Helena, MT 59601

the 1980s, the U.S. has been the largest supplier of arms to the region.

Iranian officials say they are not sure of the exact nature of the weapons, but said after the war that a number were which they destroyed themselves.

During the secret debate that began in the 220-member Majlis met for four hours Monday, recessed for two hours, then met again in the afternoon for two hours.

Meetings will be held Tuesday because it is a religious day. But the parliament will meet Wednesday to continue the debate today's meetings. It will be a short session since the regular meeting are Sunday, Tuesday and Thursday. It is not clear when a decision will be made on the hostage issue, a spokesman for the public relations office of the Majlis said after the morning session.

Iran has reported the Majlis also discussed the war between Iran and Iraq at the meeting.

Factors appeared to be extending the debate. Some reports had suggested the meeting would be limited to a single day. One was a wave of optimistic rumors from the United States of imminent release for the

hostages. The Islamic news agency, which is part of the existing session of the debate, said "most probably" the hostage issue "will be debated in the next session." It added, "It is a very important issue."

The Majlis public relations office said the parliament would not meet Tuesday because of a religious holiday and would decide today

whether to proceed to the session for the debate of the Ayatollahs' speech that were suspended on 29th day of the Assembly.

Mohammad Mohammadzadeh, a member of a party closely linked to the violent Islamic militants holding the hostages, said his faction would try to prolong the debate.

(Continued on Page 18)

## Great Falls hopes fade in getting Space Center

By DAVE FUSELIER  
IR City Editor

Great Falls is running a distant second behind Colorado Springs as the site of a major new Air Force space center, a preliminary environmental report on the huge project indicates.

The facility, which is to be in operation by 1985, will employ 2,000 people and will bring 6,100 additional people into the community it joins.

Montana's Congressional delegation and the Great Falls business community have anxiously promoted the Malmstrom Air Force Base location, which of course already belongs to the federal government.

On the other hand, the Colorado Springs site — favored all along by the Air Force because of related military functions in the area — would require the purchase of private land.

The draft environmental impact statement (EIS) released Friday by the Air Force is not final or binding. A final decision on the location of the space center won't be made in February.

But the outlook for Great Falls winning the

space center is not bright. Colorado Springs probably has it "in the bag," said Warner Mehl, a staff aide for Montana Sen. John Meagher.

The biggest hitch for Colorado Springs was an earlier problem with private land acquisition that has apparently been resolved. Mehl said.

The EIS was accompanied by a letter to interested lawmakers explaining that the Colorado board of Land Commissioners has tentatively agreed to provide land at a price well below market value.

Mehl said the Great Falls site would cost "significantly less," because of the existing land ownership and almost-new building that housed SAGE ground radar functions recently moved from Malmstrom.

A site near Kirkland Air Force Base at Albuquerque, N.M., is the only other site still under consideration for the multi-million dollar space center similar to the Houston Space Center which controls America's space flights.

Mehl said Great Falls clearly has the edge over that location.

(Continued on Page 18)

## Inside today

Local news ..... Pages 7-8  
Local sports ..... Pages 15-17  
Local government ..... Page 10  
Local business ..... Page 4  
Local politics ..... Page 14  
Local government ..... Page 2  
Local sports ..... Pages 11-13  
Local business ..... Page 2

## Census office burns

# A recount in New York

YORK (AP) — A suspicious, fast-burning early today caused severe damage to a U.S. Census Bureau office in Brooklyn, New York, all of the 1980 working papers and population figures for the neighborhood of Bedford-Stuyvesant were destroyed.

Howard Golden, a spokesman at Census Bureau headquarters in Washington, D.C., said the office was not yet available for inspection.

He said the Census Bureau had been investigating the incident and would not yet say if it appeared arson.

Local police in Brooklyn have filed charges against the Census Bureau. During the 1980 census in the city's five boroughs, a fire broke out at the Bureau's Brooklyn office.

Local police in Brooklyn said it

was the second time in two days that Bureau staff from several cities would be flown to New York to begin the recount of the area "in a few days to one week." He said the area was counted by mail in April, but that this time census workers would go door-to-door to speed returns, which must be reported to the president by Dec. 31.

Concurrently, Howard Golden, president of the Brooklyn C. of Brooklyn, was to hold a news conference later today to release results of a study showing a vast census undercount in Brooklyn.

Ten cities of New Jersey have filed suit against the Census Bureau, charging the 1980 census in the city's five boroughs was incomplete.

The Fire Department said the fire began around 1:30 a.m. amid papers on a desk on the second floor. Arson was suspected because of the time of day, the department said.

largest. The borough, one of five in New York City, bills itself as "the nation's fourth largest city" with about 2.6 million residents.

The 1980 census has been a subject of controversy in many urban areas, some of which have complained the preliminary figures from the Census Bureau are too low. The 1980 figures will be used by the federal and state governments to apportion congressional representation and to allocate federal aid funds.

Local officials and workers at the office were prepared by the office several weeks ago that potential fires could be a hazard because figures were not yet compiled. All the work was done on paper and the office had both paper census responses from the bureau.

Golden said the documents were intended to

# Great . . .

(Continued from Page 1)

The new facility will consist of a complex of buildings and five antennas. It will control all military missions of the space shuttle and will track all foreign objects in space.

The EIS looked at potential environmental impacts at each of the three sites under consideration and concluded that no significant impact would occur at any of them.

That, combined with Colorado's apparent success in acquiring the necessary land, "gave Colorado Springs the edge," Mehi said.

The Air Force will accept written comment on the EIS until Dec. 15 and plans to release the final report in February. The final location decision will be contained in that document.

The draft EIS stresses that the Air Force wants to place the space center near Peterson Air Force Base in Colorado Springs because there it can share equipment and strategy with the North American Air Defense Command which has its headquarters in Colorado Springs, 70 miles south of Denver.

According to the report, the cost of living index, based on a nationwide average of 100, is 94.5 at Colorado Springs, 94.9 at Great Falls and 105.9 at Albuquerque.

Motor vehicles associated with the new center could raise yearly automobile emissions by .19 percent.

in Great Falls, .20 percent in Colorado Springs and .14 in Albuquerque.

No new schools would be needed in any of the three communities, according to the report.

The average monthly rent of a three bedroom house is cheaper in Colorado Springs \$300. In Great Falls the price is \$308 and in Albuquerque it's \$352.

Great Falls would have fewer available housing units than the other two locations under consideration. More than 3,630 units would be available in Colorado Springs. There would be 3,459 in Albuquerque and 2,722 in Great Falls.

In both Montana and Colorado, portions of center would be visible from some adjoining roads, highways and scattered homes. The Air Force says it would consider planting trees to obscure any unsightly view.

There is little likelihood of uncovering anything of historic or prehistoric value if the center were built at either Great Falls or Colorado Springs. Several historic sites exist near the proposed site at Albuquerque, however.

The center will operate in three shifts, with 1,000 working the day shift and 500 working each of the other two shifts.

Construction of the center will begin in April of 1982 and will be completed in April of 1984. A maximum of 350 construction workers could be employed during the peak construction period which most likely will be April, 1983.

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## New logging system demonstrated by FS

BOZEMAN (AP) — The Forest Service has spent \$9,441 for a contract with an Oregon company to give six demonstrations of a small-scale, skyline cable logging system that might be used in the northern Rockies.

The first demonstration of the Austrian-built machine was conducted last weekend in the Hyalite drainage south of here.

The Forest Service contracted with Forest Engineering Inc. of Corvallis, Ore., to display the system. FEI also supplied the Forest Service with information about similar systems, most made in other countries and currently

cable system stretched down a 150-foot-wide corridor of felled trees.

Powered by a gasoline-fueled car engine, a carriage with two cable chokers moves up and down the main cable, about 15 feet in the air, and hauls the logs onto the ridge, then to the tower.

With one man running the controls and another in the woods booking the logs, about 1,000 board feet of timber per hour can be hauled out, FEI officials said.

"Without a system like this, there's a lot of timber you could never get," said Bozeman district ranger Jim Smith.

# Under PT Start Delayed Again

## 'High-Cost' Per Diem Areas Listed

MILITARY people in the following cities qualify for special "high-cost" per diem rates to cover their actual expenses above the maximum amounts paid in other continental U.S. cities: new per diem ceiling is actual expenses up to a limit of \$10 per day.

Not here is only of major in high-cost areas. The cost per diem also may in several surrounding areas.

### Per Diem

	Daily \$ Amount
	61
	61
	75
	75
	57
	57
	70
	61
	75

in in the place of the inverted triangle on the map. Gen. C. G. C. of Staff Gen. C. G. C. has to a major in the DOD to approve

City-Area	Daily \$ Amount	City-Area	Daily \$ Amount	City-Area	Daily \$ Amount
San Francisco	75	Lockport	59	Long Island	59
Santa Barbara	63	Edgewater	57	Syracuse	57
SAN JOSÉ	64	MASSACHUSETTS	57	Long Island	57
COLORADO	67	Cape Cod	59	OHIO	59
Denver	69	New Bedford	54	Cleveland	54
VAIL	69	Martha's Vineyard	59	Tulsa	59
Colorado Springs	69	Springside	53	OREGON	53
CONNECTICUT	56	Boston	66	Portland	66
Hartford	63	New Haven	53	PENNSYLVANIA	53
New Haven	63	Michigan	59	Pittsburgh	59
DELAWARE	62	MICHIGAN	57	Pittsburgh	57
Wilmington	62	Kalamazoo	57	Valley Forge	57
DISTRICT OF COLUMBIA	75	Grand Rapids	56	Harrisburg	56
Washington DC	75	Pontiac	62	Chester	62
FLORIDA	64	Detroit	75	Indianapolis	75
Fort Lauderdale	54	MINNESOTA	59	King of Prussia	59
Miami	62	Minneapolis	57	Philadelphia	57
TAMPA	61	St. Paul	61	SOUTH CAROLINA	61
Key West	64	MISSOURI	61	Huntington	61
West Palm Beach	64	Kansas City	65	MEMPHIS	65
St. Petersburg	62	St. Louis	67	McAllen	67
Sarasota	60	NEVADA	75	TEXAS	75
GEORGIA	56	Las Vegas	53	San Antonio	53
Atlanta	56	NEW JERSEY	63	Dallas	63
ILLINOIS	74	Atlantic City	63	EL PASO	63
Chicago	74	Fort Lee	67	Houston	67
INDIANA	62	Cape May	67	El Paso	67
INDIANAPOLIS	62	Newark	67	BIRMINGHAM	67
KANSAS	62	Jersey City	67	WASHINGTON	67
WICHITA	59	Elizabeth	58	Seattle	58
Kansas City	63	Tom's River	67	Tacoma	67
KENTUCKY	58	Peterson	67	Spokane	67
LEXINGTON	59	Elizabeth	67	WEST VIRGINIA	67
Louisville	59	NEW MEXICO	58	Charleston	58
LOUISIANA	59	Los Alamos	75	WISCONSIN	75
New Orleans	75	NEW YORK	56	Milwaukee	56
MARYLAND	61	New York	63	WYOMING	63
Baltimore	75	Lake Placid	63	Cheyenne	63

"Meyer wants the Surgeon General to prove that soldiers should not be tested in all three events," an official said.

The new program for under-

Early notification of new test standards, the official said, will give soldiers an opportunity to try them out before starting for-the-record testing in December.

miles in less than 15 minutes. Twenty-year-old females will be required to perform 16 push-ups, 27 sit-ups and run two miles in less than 22 minutes.

Montana not considered  
a high cost area  
by DOD standards - -

RESPONSE TO COMMENTS  
FROM INDIVIDUALS

Mr. Larry Ranieri, Helena, Montana

116. The "All Items" cost of living index for Colorado Springs and Great Falls are, for all intents and purposes, very nearly the same (94.5 and 94.9 respectively). Temporary duty allotments (TDY) are established by the military and take into account the cost of food and temporary lodging in each location. The "All Items Index" referred to in this comment does not reflect the cost of living indices for these two categories alone, but represents an average for the cost of grocery items, housing, utilities, transportation, health care and miscellaneous goods and services.

117. The VHA payments were made available as of 1 October 1980 to military personnel who reside in high-cost areas. At the time the CSOC EIS was being prepared, the VHA rates were not yet available and thus could not be considered. The VHA rates are determined on factors other than the average monthly rental cost of three-bedroom homes (i.e., the \$400 and \$308 figures for Colorado Springs and Great Falls, respectively). Also, Colorado Springs was designated as a high-cost area as of 1 October 1980 which was after the CSOC DEIS was prepared.

118. This information is so noted.

END  
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10-81

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